

MILITARY REVIEW



THE UNIVERSITY
OF MICHIGAN

APR 6 1962

PERIODICAL
READING ROOM



U. S. ARMY COMMAND AND GENERAL STAFF COLLEGE
FORT LEAVENWORTH, KANSAS

OCTOBER 1960

VOLUME XI

NUMBER 7

U. S. Army Command and General Staff College



COMMANDANT	Maj Gen Harold K. Johnson
ASSISTANT COMMANDANT	Brig Gen William A. Cunningham, III
DEPUTY POST COMMANDER	Col F. A. Liwski, Arty
CHIEF OF STAFF	Col R. H. Schellman, Inf
SECRETARY, USA CGSC	Col R. A. Broberg, Arty
CHIEF OF SUPPORT OPERATIONS	Col E. G. Edwards, Armor
CHIEF OF RESIDENT INSTRUCTION	Col E. Chalgren, Jr., Inf
CHIEF OF DOCTRINE	Col J. E. Arthur, Inf
CHIEF OF COMBAT DEVELOPMENTS	Col R. C. Works, Inf
CHIEF OF NONRESIDENT INSTRUCTION	Col R. H. Van Volkenburgh, Jr., Arty

Military Review

EDITOR IN CHIEF

COL KENNETH E. LAY, INF

ASSISTANT EDITOR

LT COL JERRY G. WALLACE, ARMOR

FEATURES EDITOR

LT COL CLEO S. FREED, ARMOR

SPANISH-AMERICAN EDITION

Editor

LT COL C. BETANCES-RAMIREZ, INF

Assistant Editors

MAJ JUAN R. MELÉNDEZ, INF

CAPT ANTONIO BUDET, INF

BRAZILIAN EDITION

Editor

LT COL ALBERTO DE A. CARDOSO, INF

Assistant Editor

MAJ MAURÍCIO FELIX DA SILVA, ARTY

ADMINISTRATIVE OFFICER

CWO W-4 T. H. GUFFAIN, USA

PRODUCTION OFFICER

LT COL LOUIS RUIZ, CMLC

STAFF ARTIST

CHARLES A. MOORE

MISSION.

The MILITARY REVIEW, official publication of the United States Army and the United States Army Command and General Staff College, disseminates modern military thought and current Army doctrine concerning command and staff procedures of the division and higher echelons and provides a forum for articles which stimulate military thinking. Authors, civilian and military alike, are encouraged to submit articles which will assist in the fulfillment of this mission.



POLICY.

Unless otherwise indicated, the views expressed in the original articles in this magazine are those of the individual authors and not those of the Department of the Army or the United States Army Command and General Staff College.

Editor.

MILITARY REVIEW—Published monthly by U. S. Army Command and General Staff College, Fort Leavenworth, Kansas, in English, Spanish, and Portuguese. Second-class postage paid at Fort Leavenworth, Kansas. Subscription rates: \$3.50 (US currency) a year in the United States, United States military post offices, and those countries which are members of the Pan-American Postal Union (including Spain): \$4.50 a year in all other countries.

MILITARY REVIEW

VOLUME XL

OCTOBER 1960

NUMBER 7

CONTENTS

Revolutionary War and Psychological Action	4
<i>George A. Kelly</i>	
The Finest Hour of Marshal Ney	14
<i>Major General H. Essame, British Army, Retired</i>	
The Army's People in Changing Times	19
<i>Lieutenant Colonel Anthony L. Wermuth, Infantry</i>	
The Austrian Federal Army—An Appraisal	37
<i>Walter Hamburger</i>	
Strategic Mobility Is a National State of Mind	43
<i>George Fielding Eliot</i>	
How Old Is Old?	54
<i>Lieutenant Colonel Francis J. Kelly, Armor</i>	
The Generalship of José Félix Estigarribia	58
<i>Captain David H. Zook, Jr., United States Air Force</i>	
MILITARY NOTES AROUND THE WORLD	65
MILITARY DIGESTS	75
<i>The Military Side of the African Problems</i>	
<i>Proposed: A South Atlantic Treaty Organization</i>	
<i>In the Belgian Congo</i>	
Africa, What to Read	106
<i>Dr. Francis H. Heller</i>	
BOOKS OF INTEREST TO THE MILITARY READER	107

Message From The Commandant



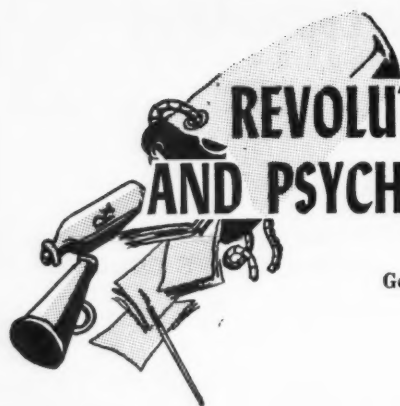
U. S. ARMY COMMAND AND GENERAL STAFF COLLEGE FORT LEAVENWORTH, KANSAS

The **MILITARY REVIEW** is one of many media of the United States Army Command and General Staff College for the dissemination of Department of the Army doctrine throughout the military establishments of the world. In addition to articles based on Department of the Army doctrine, the magazine provides a sounding board for new ideas. Increasing effort is being devoted to combing the pages of official and semiofficial publications of foreign military forces to provide for **MILITARY REVIEW** readers current and projected activities and military thinking of other than United States forces. Through its English, Spanish, and Portuguese editions, the **MILITARY REVIEW** reaches several thousand subscribers in more than 60 countries.

The United States Army Command and General Staff College solicits ideas which stimulate thought and project it into the future. We seek your advice as to how our magazine can better serve the needs of its readers. We welcome comments on the content of our publication, particularly ideas in rebuttal, when you, our readers, feel that they are appropriate.

We ask that you contribute to the battle for the minds of men that is being waged with increased intensity with each passing day, so that those nations striving to preserve their freedom to choose to remain free may draw upon every available resource.

Harold K. Johnson
HAROLD K. JOHNSON
Major General, USA



REVOLUTIONARY WAR AND PSYCHOLOGICAL ACTION

George A. Kelly

WHILE Anglo-Saxon observers are unquestionably more familiar with the intricacies of the discussion that has taken place since 1954 (the year of the "massive retaliation" doctrine) regarding the prospects and conditions of nuclear war, there has been a no less spirited debate in France over the nature of a very different kind of conflict.

To qualify this type of war which has so seized the imagination of French military analysts, the comprehensive title of *la guerre révolutionnaire* has been given. It is construed as a function—perhaps the most serious one—of the "protracted conflict" described by Mao Tse-tung, and its alleged aim is nothing less than the undermining of the Capitalist camp through indirect, but, nevertheless, decisive military action. Continuing unabated for a long enough period of time, this subtle and steady revolutionary gestation could so weaken the West that any ultimate resort to nuclear war would become unnecessary.

La guerre révolutionnaire, consequently, whatever its manifestations, is a manipulation of the policy centers of Moscow and Peking. It is itself *total war* on a *limited* scale, because it utilizes propagandistic appeal to whole populations and all economic, social, and political levers it can avail itself of. Wherever it erupts, it is one and indivisible, because the unitary aim of weakening the West is nowhere sacrificed. It is always conducted under a certain cloud of political ambiguity and generally is attached firmly to one or another nationalist or independence movement, thereby avoiding, in each instance, the provocation to general war in which the major powers might confront one another. There is little doubt in French military circles that this type of conflict exists—and exists permanently as a condition of global Marxist aggrandizement—and that it is doing irreparable damage to the position of the West and to the survival of "traditional Western values."

The French experience of la guerre révolutionnaire and its contingent problems are worthy of detailed scrutiny by qualified military experts. This subtle and steady revolutionary gestation could so weaken the West that any ultimate resort to nuclear war would be unnecessary

The only real point of dispute is the extent to which this phenomenon is actually controlled by the leaders of communism, whether they can indeed unleash *la guerre révolutionnaire* in widely scattered parts of the world at will or whether they have merely known how to attach their claims with great realism and sagacity to a broader "systemic" revolution which is basically not the prerogative of any ideology.¹ In either case, the effect is damaging and does not alter the fundamental perspective of the problem. If it is exaggerated to claim that all instances of *la guerre révolutionnaire* are directly inspired by the Soviet Union or Communist China, it is, nevertheless, clear—according to Claude Delmas, one of the best-balanced writers on the subject—that "the principles of the achievement of a national struggle of revolutionary character for the conquest of power were codified in the Marxist doctrine."

Commandant Jacques Hogard, another expert, maintains that if the long arm of the Kremlin is not evident in the first stage of a revolutionary crisis, it is bound to assert its presence in the second. The unlimited aspirations of Communist aggression are, therefore, the backdrop against which the nature of *la guerre révolutionnaire* must be understood.

Revolutionary Operations

Commentators emphasize that the Communist revolutionary conspiracy is like an iceberg, its great mass being hidden below the surface, from which isolated promontories appear to sprout. To win or lose

a single battle or campaign does not in itself amount to an integral achievement; but success or failure in a series of conflicts can set in motion a trend either, respectively, toward containment of the menace or toward disordered retreat in the face of it. Seen in this light, Czechoslovakia, Indochina (Vietnam), Suez, Tunisia, Morocco, and Iraq were lost battles. Greece, Iran, the Philippines, Cambodia, and Malaya were, in their time, victories gained, albeit defensive ones. Algeria is seen as the critical turning point in this catalogue of revolutionary operations.

To the theorists of *la guerre révolutionnaire*, the French National Liberation Movement (FLN) is equivalent to communism and the pacification of the territory is nothing less than the "defense of the Occident." Internal political problems aside, it is by this very simple standard that the characteristic attitudes of the French Army must be measured. Algeria is, above all, a war of the flank whose object is Western Europe itself, cradle of the "traditional values" on which French military writers unceasingly insist.

Jean Planchais, military correspondent for *Le Monde*, describes this attitude vividly:

General Callies, inspector general of the armed forces in North Africa, scarcely ever moves about without a world map where he has drawn a large black arrow, which, issuing from the depths of Red Asia, pushes its point as far as the Maghreb. To him this is the best analysis of the Algerian situation.

Grand Strategy

It would be dangerous to reject the capital importance which the French have attached to the concept of *la guerre révolutionnaire*, however extreme some of the interpretations seem to be. But we must recognize some very precise psychological conditions that make this analysis highly compatible with national needs of morale and prestige. A decade and a half of non-

¹ See the recent American work *Protracted Conflict*, by Robert Strausz-Hupé, et al., New York, 1969, which analyzes this situation with exemplary insight.

George A. Kelly is engaged in research at the Harvard University Center for International Affairs where he is associated with Dr. Henry Kissinger. Mr. Kelly served two years with the 1st Armored Division from 1955 to 1957, after which he spent 16 months in Europe in writing and independent study.

possession of nuclear armament in a world where its minatory power appeared omnipotent engendered in the French Army both a measure of chagrin and a requirement for formulating doctrines of grand strategy in which the emphasis would not be on the technical perfection of weapons or on statistical measurements of power.

The growing assumption of the "balance of terror" argued that as military potential approached the conceivable limits of destructiveness there was correspondingly less chance that the weapons of total cataclysm would ever be used, but rather that military activity would be carried on by less direct means. Whereas this likelihood led the nuclear powers to seek alternatives in the investigation of "limited wars" which would be essentially modifications of classical conflicts implying either the use or nonuse of nuclear arms, the French turned their attention to a much more restrictive, yet more total, phenomenon which their allies had sometimes mistakenly identified as "brush fire war" and furthermore given little concentrated study to.

La guerre révolutionnaire claimed its essence from the celebrated maxim of Clausewitz and opposed itself not to total nuclear war but to total peace. For peace in the generally accepted sense and *la guerre révolutionnaire* could be, and demonstrably were, simultaneous and by no means exclusive. The tactics revealed by the enemy in the writings of his theoreticians (Lenin, Trotsky, Mao) and in the two colonial wars the French had fought in Indochina and Algeria enabled the planners to postulate theories for the novel kind of war they had perceived.

No Ultimate Weapon

The paradox of modern war so successfully posed by the theory of *la guerre révolutionnaire* was further abetted by French military sensitivities. If war was polyvalent (a favorite word of M. Bourges-Maunoury while he held the portfolio

of national defense in the Guy Mollet cabinet), then there was no ultimate weapon: both the knife and the tactical nuclear bomb might have their uses. If nuclear war was massively impersonal, the conditions of *la guerre révolutionnaire* imposed the primacy of the individual in the conduct of operations.

The resourcefulness of small units became paramount, and this fact had the tendency to restore to war some of the glamor so essential to the morale of many who engage in combat. It became a compliment to the French soldier and his military organization to proclaim this function of initiative as a specific national aptitude. Thus, as a result of the Indochinese and Algerian conflicts, it was alleged—again far from falsely—that the French among Western armies had the greatest experience and most adequate indoctrination for the new type of combat. As Colonel Némou wrote in the *Revue de Défense Nationale*:

The French Army is practically the only one to have encountered communism in action in a vast land war of style and amplitude previously unknown. It can, therefore, open broadly the debate on the form of future war.

The doctrine of *la guerre révolutionnaire* was, it would appear, the result both of objective analysis of combat experience and of institutional self-appeasement. It would be incorrect, however, to suppose that the subjective arguments were of a nature to destroy the thesis as a whole. Again, it seems just to say that only the limits of the thesis are in question.

Military Conquest

La guerre révolutionnaire recognizes that military conquest of the enemy will be difficult and indeed prohibitive. If the adversary is bold enough to undertake a battle with regularly constituted fighting units and is beaten by the "forces of order," he still has the possibility of retiring to the *maquis* and reverting to continuous

guerrilla activity, provided that his conviction in the war remains staunch. This was the precise case of General Giap of the Vietminh, beaten in Tonkin in 1951 in a regular engagement by the army of De Lattre. Customarily, a revolutionary army seeks a major military encounter only when it is sure of its numerical, technical, and strategic superiority in a given circumstance (for example, Dien Bien Phu). Until this time arrives the objective will be to drain the morale of the "pacification forces" through interminable raids, ambushes, skirmishes, reprisals, and a steady stream of carefully controlled propaganda.

Civilian Support

One particular condition is absolutely essential for the waging of revolutionary war: the support of the surrounding civilian masses. The revolutionary soldier must be able to disguise himself—sometimes in groups of regimental strength—among the population and reemerge when the time is ripe. He must be, as Mao Tse-tung puts it, like "the fish in water." Mao also writes that "revolutionary war is the war of the popular masses; it cannot be waged except . . . by enlisting their support." Therefore, it is to this "mass" that the counterrevolutionary army must likewise address itself: first, by the interdiction of the enemy's grasp over the indigent population through both force and persuasion; second, by rallying the sentiments of the people to the cause of the "forces of order."

The mass, according to the most systematic theorists, is inert; it blows as the wind blows. Consequently, it becomes a question of employing a spectrum of means in the most advantageous manner if the allegiance of the mass is to be obtained. "*Cette masse est à prendre*," declares Colonel Charles Lacheroy, former chief of the Psychological Action Service of the Ministry of Defense. "*Comment la prend-on?*" For it is elementary and undisputed in *la guerre révolutionnaire* that

the first step is that of forming a base for revolutionary activity.

The axiom cuts both ways, because it is equally essential to the "forces of order" that their base of operations should be protected and a core of sympathy created among the surrounding inhabitants. With absolute military decision unavailable, the struggle becomes one for the allegiance and control of the population. This lesson has been analyzed frequently in the light of modern experience: where Ho Chi Minh succeeded brilliantly in extending his sway through the creation of popular support, Markos, the Greek Communist, failed in 1947 because of casual and ineffective methods of political indoctrination among the masses.

It becomes evident that if *la guerre révolutionnaire* is sometimes a war of terror and torture (as the experiences of Algeria have abundantly shown), it is also a conflict of persuasion, manipulation, and compulsion. If there is nothing strikingly novel about this circumstance—for history is studded with the effects of illustrious persuasion—the scientification of the techniques employed is at least a significant innovation. This is, perhaps, the most confused and interesting aspect of *la guerre révolutionnaire*, and the one which we shall proceed to examine.

Psychological Weapons

The psychological weapon has been used in warfare since time immemorial, but never have its manipulators been so conscious of their activity as such as in this present "century of total war." The role of Communist "agitprop" and the function of the Hitlerian mass spectacles, hate campaigns, and "blood and soil" motifs are too well-known to require comment here. Today, propaganda technique and subsidiary uses of mass psychology may be at the total service of an aggressive ideology, one which either holds the formal levers of command in a nation-state or aspires to do so through subversion.

The French, more than any other Western nation, have experienced this pertinent factor in combat. The incessant psychological warfare of intense ideological character waged by the Vietminh against their own troops, the population of the country, the French Expeditionary Force, and the people of neighboring states easily convinced certain French officers that the Communist contagion could not be checked unless determined steps were taken to adopt some of these same methods in the West. The shattering experiences suffered in the prisoner of war camps of Ho Chi Minh furnished a final complement to the more indirect techniques of visual and aural propaganda.

An essential ingredient of *la guerre révolutionnaire* was the unprincipled use of psychological warfare. Increasingly, influential spokesmen in the French services, humiliated and smarting from the defeat of 1954, began to demand immediate action through improved methods of troop education and the establishment of psychological warfare services that could enable French forces to meet the revolutionary challenge on its own terms wherever it might break out in the future.

With regard to the psychological aspects of modern war, French military theorists divide the range of action into two components which they label respectively *la guerre psychologique* and *l'action psychologique*. Normally, the two terms would convey the dichotomy of "propaganda" as opposed to "information," but it is quite evident that these have become confused and that propaganda is paramount in both instances. *La guerre psychologique* comprises those elements of propaganda, psychological riposte, and demonstration which are specifically directed toward the forces of the enemy and designed to undermine his will to resist. In this sense it corresponds roughly with what the US Army terms "tactical" or "strategic" operations in its Psywar doctrine.

L'action psychologique, on the other hand, embraces those efforts which either contribute to the morale and allegiance of the indigenous populations or to the fighting will of the "forces of order" themselves. This would recall a blend, in American military terms, of troop information and education and the aspect of Psywar known as "consolidation operations."²

It is not difficult to see that in a fluid campaign such as the Algerian, where small forces are individually engaged in combat and where the enemy fighter and the civilian, in conformity with the "fish in water" principle of *la guerre révolutionnaire*, are frequently indistinguishable, the two jurisdictions have a tendency and a temptation to overlap. Nevertheless, the distinction is clearly drawn in the significant instruction to the armed forces signed by the (then) Minister of the Armies, M. Pierre Guillaumat, on 28 July 1959, the ostensible purpose of which was to curb many of the independent and deep-rooted abuses of the psychological arm that the Algerian war and its surrounding political milieu had produced.³

Inasmuch as the province of *la guerre psychologique* is, at least in theory, fairly closely confined to those techniques familiar to the American military services (loudspeaker and leaflet operations, radio broadcasting operations, and special interrogation of prisoners), attention shall be devoted more exclusively to those elements comprehended in the term *l'action psychologique*, the direction of information and propaganda toward friendly or at least neutral targets.

Political Indoctrination

The origins of the pressure for a doctrine of psychological action in the French services were assuredly both theoretical and visceral. We have already spoken at

² See Extension Course of the Psychological Warfare School, US Army, Subcourse 12, "Consolidated Propaganda Operations," 2 June 1954.

³ *Le Monde*, 3 October 1959.

some length of the theoretical in connection with *la guerre révolutionnaire*. Now we must briefly evoke the experience of Indochina on the human and emotional scale. In the compounds of the Vietminh the prisoners experienced constant political indoctrination, including compulsory study groups, lectures, and classes on Marxist texts. "Political progress" was encouraged through systems of rewards and punishments, creation of fear, doubt, and apprehension among the subjects, enforced autocriticism, and the whole battery of psychological manipulation which we collectively call "brain washing."

This novel and debilitating process left deep scars on the returning officers. If it did not make many Communists, it did make a group of embittered professional soldiers who reserved whatever anger they could not muster for the Vietminh to the system, the politicians, and the insouciant civilian population of France in general—in short, the whole complex of democratic organization that had defended them and itself so badly against a little-understood menace. Liberal democracy stood, in a sense, condemned as ineffectual. "One will never insist enough on this point: propaganda directed from the base of a mild-mannered democracy loses nine-tenths of its chances, while on the contrary it achieves its maximum efficiency from the base of a clean, hard organization of parallel hierarchies,"⁴ fumed Colonel Lacheroy, himself a former inmate of the Vietminh. Although this article does not touch upon the intense political ramifications of the *action psychologique* movement, it is appropriate to point out that variations of Lacheroy's attitude were instrumental in the unwillingness of the French services to defend the waning prerogatives of the Fourth Republic in May 1958.

Generally speaking, the mode of think-

ing in 1954-56, when *l'action psychologique* was germinating, was the following: when the adversary is unscrupulous, what is fair is what works. And what works can be admired, even if the one who has delivered the hard lesson inspires nothing but hate. This was to lead a number of French officers to the detailed examination of the methods employed by the Vietminh in the Indochina War as well as to the study of a number of central Communist and psychological texts which provided both a justification and a methodology of the type of warfare they were proposing. The anguish of the Indochina defeat gave rise to serious questioning of democratic military doctrine. In a lecture given at Nice on 20 July 1957, Lacheroy exclaimed:

In Indochina, as in China, as in Korea, as elsewhere, we observe that the strongest seems to be beaten by the weakest. Why? Because the norms we used for weighing our opposing forces, those traditional norms, are dead. We have to face up to a novel form of warfare, novel in its accomplishments and novel in its achievements.

Many of the officers who came back from Vietminh prison camps found themselves posted to the faculties of the war colleges and to the higher staffs in their quality as participants in the most recent war. Others "prepared certificates in psychology and sociology." They shared and compared experiences. A clarion article by the brilliant and dogmatic General Lionel Chassin, who had been De Lattre's air deputy in Indochina, served as a rallying point for the discontented. He wrote:

It is time for the army to cease being the grande muette. The time has come for the Free World, unless it wishes to die a violent death, to apply certain of its adversary's methods. And one of these methods—probably the most important resides in the ideological role which, behind

⁴ *Le Monde*, 4 August 1954. A "parallel hierarchy" denotes the omnipresent party organization in a totalitarian state, always seconding and "paralleling" the regular state administrative apparatus.

the Iron Curtain, has been assigned to the military forces.⁵

In March and April 1955 the review *Hommes et Mondes* furnished an operational sketch of proposals related to the Chassin criticism. Written under the collective nom de plume of "Milites," the article began with a section entitled "L'Armée en Marge de la Nation." Positive means for encouraging a common understanding of aims between the army and the French metropolitan population were urged. A later section called for the revitalization of the traditional values of the nation through educational reform, with a particular target being the younger citizens. The army, said the article, would be prepared to "give the citizens a 'moral armature' against an aggression which would be not only material but psychological . . . show him how to fight effectively on both the material and psychological planes."⁶

Army-Youth Committee

Partly as a result of the "Milites" study, an Army-Youth committee, established by the government in 1953, was revitalized under the presidency of General Jacques Faure. At a meeting of representatives of this group held at Chamonix in February 1956, Faure urged his young listeners to seek a "precise inventory" of national myths and to weigh "their emotional density." At the same time an ambitious troop information program was instituted at all echelons, making use of much psychological material in its presentation and particularly directed toward anti-Communist indoctrination. Thus the primary steps were taken in accordance with the doctrine of *la guerre révolutionnaire* to protect the base, "*protéger les arrières*."

In the meantime the military analysts addressed themselves to the matter of technique itself. Some of the extremists

unquestionably would have preferred to see a more authoritarian line of political command proceeding from the highest government sources in Paris. This would have inhibited daily vacillations of policy and eased the task of imposing the new methods which had had such a startling fund of potency in the hands of Ho Chi Minh. Others, while endorsing the re-orientation of psychological warfare to meet the needs of combating the enemy in Algeria, were more content to work within the traditional structures provided by modern democratic convention.

In any case, from 1956 on the fledgling Psychological Action Service (SAPI), which now had its own command channels and which furnished an officer to all military staffs (*5ème bureau*), found itself—owing to the exigencies of the Algerian conflict—with considerable local license and autonomy, ample funds, and a constant ability to multiply its activities in what normally would be construed as the civilian sphere. A directive on the subject of the aims of the war by the Resident Minister for Algeria, M. Robert Lacoste, published in June 1956, did much to regularize and legitimize the new concept of warfare which was increasingly thrown into the breach as the volume of the rebellion mounted.

Natural Laws

An intellectual substratum, sometimes misused or misconstrued, governed the French practice of psychological action, or at least was often used to justify it scientifically. It was believed—and indeed the belief is shared by many psychologists—that there were rules, almost amounting to natural laws, which could be discovered pertaining to the imposition of obedience on amorphous crowds, such as the Islamic peoples of North Africa. The works of Lenin and Trotsky were combed for all points relating to crowd behavior, and the unsystematic science behind the nefarious art of Hitler and Goebbels was studied.

⁵ *Revue Militaire d'Information*, October 1954, p. 74.

⁶ "Enquête sur la Défense Nationale," *Hommes et Mondes*, May 1955, p. 163.

Other pioneer, and often native, crowd sociologists, such as Gustave Le Bon, hinted at laws and techniques that were introduced helter-skelter into the arsenal.

Probably the most influential *maître de pensée* was the Russian *émigré* psychologist Serge Tchakhotine, a disciple of Pavlov, who maintained in his book, *The Rape of Crowds by Political Propaganda*, that crowds could indeed be manipulated by clever oratory and skillful demonstrations through the induction of "conditioned reflexes." Tchakhotine, who, although himself a Marxist, had absorbed much of the Hitlerian method from residence in late-Weimar Germany, set great store in the mounting of mass demonstrations, use of symbols (Swastika, goose-step, and Roman salute); military music, crowd-leader dialogue, and other rhetorical and psychological tricks. More than a little of the Tchakhotinian style can be detected in some of the performances at the Algiers Forum in the days following the 13 May 1958 *coup d'état*, and directives of the psychological action services from this period clearly reveal the debt.

Although tentative efforts had been made in Indochina from 1952 on (under the auspices of a joint Franco-Vietnamese Psychological Warfare Branch headed by a Vietnamese official Nguyen Huu Long) to riposte against the Vietminh with their own methods, the first systematic use of the new techniques by a Western army was in the Algerian fighting. Three of four newly organized loudspeaker and leaflet companies (*Compagnies de Haut-Parleurs et Tracts*), formed on the American model, carried anti-FLN propaganda, entertainment, and educational material throughout the ravaged countryside in massive "consolidation operations." At the same time, the SAPI itself, through command directives and through the army's regular weekly publication *Le Bled* (which attained a circulation of 350,000), concentrated its efforts on keeping morale and will to fight at a high pitch, counter-

attacking against "defeatist" propaganda from the *métropole*, and launching concerted campaigns aiming particularly at the conversion of the urban Moslem populations of the large centers.

A third, and most effective, type of *action psychologique* was performed by the SAS (Section Administrative Spécialisée) and SAU (Section Administrative Urbaine) officers, numbering more than 500, who had been given their missions in 1955 and 1957, respectively.⁷ The former in the countryside, the latter in the cities, these men had no direct hierarchical connection with the *cinquièmes bureaux*, but it often happened in the smaller units that a single officer received both staff designations. The task was to work directly with the indigenous populations in the immediate zone of operations, helping to establish schools, giving sanitary and agricultural advice, distributing food, assisting resettlement, and, of course, winning native allegiances both actively and passively for *l'Algérie française*.

The terrorist campaigns of the FLN waged in 1955-56 had been extremely effective in depriving the "forces of order" of indigenous support, and it fell upon the shoulders of the SAS and SAU to deny this support to the enemy both through a variety of humane acts and the exercise of positive military control in the "spoiled" areas. A day-by-day account of these operations is furnished in the well-known *Nous Avons Pacifié Tazalt*, by Jean-Yves Alquier, a reserve lieutenant of the SAS.

Unquestionably, this experiment in civil-military relations bore much good fruit and some bad. It is, perhaps, the most extensive example of "consolidation operations" in the history of Western armies.

⁷ Governor General Jacques Soustelle signed the decree creating these organisms on 26 September 1955, thereby reviving the old idea of "Arab bureaux," which dated as far back as a hundred years to the time of Marshal Bugeaud. See *Building the New Algeria—Role of the Specialized Administrative Sections*, Ambassade de France, Service de Presse et d'Information, September 1957.

It would, however, be mistaken to assign its entire origin to the new doctrine of *l'action psychologique*, for in many respects it resembles and conforms with the pattern of colonial relationship recommended by Marshal Lyautey, especially in his essay "Du Rôle Colonial de l'Armée," written over 50 years ago.

New Techniques

Two aspects of the new doctrine which, however, owe little or nothing to French colonial tradition and have been of paramount importance in the conduct of the Algerian campaign are the techniques of relocation of populations and political re-education. Usually, especially in the case of rural populations, the two operations are combined. It had been noticed that the relatively static role of village populations in Vietnam had worked to the advantage of the enemy. It had given him the opportunity to choose his targets like sitting ducks, unlimited means for subversion and infiltration (*pourrissement*), and a possibility of establishing his bases far to the rear of the outposts of the French Expeditionary Force.

In Cambodia, however, a mass resettlement of rural populations (about 600,000), made possible by the greater availability of arable land and the less emphatic association of the Khmers with their village community, had had the effect of snatching a malleable and easily terrorized population out of the enemy grasp, while the pacification could be pursued in earnest in the vacated territory. The enemy, no longer able to rely on levies and extortions from the intimidated villagers, was forced to fall back on his regular bases. In the meantime, the uprooted people were resettled in stockaded villages suited for autodefense, erected by military labor, and kept under close surveillance by the "forces of order." Often the facilities of the new habitations were much improved.

Because of the regular rectangular layout imposed in the reconstruction for rea-

sons of internal security, the technique became known as *quadrillage* ("gridding"). *Quadrillage* also implied that spheres of authority in the area could be well-delineated. This produced, we may say guardedly, a measure of military control and guidance previously unexperienced in both city and country; at the same time it notably improved conditions of hygiene, diet, medication, and the general standard of living. The dislocated natives often became, in effect, wards of the army.*

Political Indoctrination

The program of resettling the population has been carried out at high speed in Algeria, a country topographically favorable for the operation. It is estimated that between a million and a half and two million Moslem Algerians have changed their residence under these conditions. As soon as they are regrouped in the new villages, it is current practice to grant them a liberal amount of political indoctrination according to the precepts of *l'action psychologique*. The themes of *intégration* and social evolution are steadily applied, confidence in General de Gaulle as a kind of totemistic figure is reinforced, and the lies and treachery of the FLN are exposed and condemned. What the effects of this massive undertaking will finally be is difficult to predict, but we may say that it has promoted the "pacification" of numerous sectors of the country despite the opposition of a stubborn and resourceful enemy, himself highly skilled in the practice of *la guerre révolutionnaire*.

Another undoubted success of *l'action psychologique* was the pacification of the Casbah of Algiers by Colonels Godard and Trinquier at the end of 1957 and beginning of 1958. Here, there was no question of relocating populations in an area honey-combed with FLN agents that were able to control the section through threats of terror and exemplary reprisals. Colonel

* See Captain André Souyris, "Un Procédé Efficace de Contre-Guérilla," *Revue de Défense Nationale*, June 1956, pp 686-699.

Godard himself broke the enemy network by penetrating it in disguise and uncovering its operations. The *ratissage* that followed was neither lovely nor particularly humane, but the show of force had the effect of liberating the bulk of the people from the silent terror. Thereupon, the troops of the SAU proceeded to carry out the same kind of "consolidation operations" commented on elsewhere.

The events of the forum and the referendum of 1958, on the other hand, even if they do, in part, suggest the atmosphere of Tchakhotine, owe their success to much more "traditional" methods and to the personal prestige of General de Gaulle. It is appropriate also to remark that the General, himself a master of psychological action, has never taken a very kindly view of the new techniques, feeling them to be an abuse of the normal activities of the armed services. Consequently, it is not surprising that a more serious check has been placed on *l'action psychologique* in Algeria since 1958 than ever existed under the last four governments of the Fourth Republic. In the meantime, the controlled use of psychological methods for achieving military and political aims has become an approved part of French military doctrine, as has the concept of *la guerre révolutionnaire*.

Conclusions

It should be noted that these phenomena have attracted a great deal of attention in the French press, most of it unfavorable. I do not propose to judge this point. The excesses which the exponents of *l'action psychologique* on occasion permit themselves are quite obvious and need not be spelled out in an article which strives to avoid the polemical. The outstanding question appears to be this: How is it practical and morally defensible that "Western, Christian, and Mediterranean values" can be defended through recourse to the methods of the very enemy that

is seeking to destroy these values? Is there a judicious balance? Where precisely can the line be drawn? Maurice Mégret, a distinguished writer on military topics, construes *l'action psychologique* as an "infantile malady of information." But perhaps the case is not quite so simple. Certain psychological warfare officers have unquestionably been carried away by the possibilities of the new role they have staked out for themselves. "Call me a Fascist if you like," said Colonel Trinquier in an interview in 1958, "but we must make the people easy to manage; everyone's acts must be controlled."

The association of certain *5ème bureau* officers with the leaders of the Algiers rebellion of January 1960 has been widely noted, leading to the suppression of the SAPI in Algeria and to the indictment of its zonal chief. "Intoxication" is the word the political scientist Maurice Duverger uses to describe this attitude. "What good does it do to fight in the name of a cause if one denies and destroys that which he justifies? . . . It is not a matter of replacing one 'intoxication' (the Communist) with another but simply of putting an end to all intoxication."¹⁰

No other Western army has reached the point of crisis implicit in the French hesitation about psychological action. Perhaps this is due to the fact that our formal and political institutions are sounder and less subject to crisis. But it is also because we have not experienced the same bitter lessons, in length and intensity, of *la guerre révolutionnaire*. There may assuredly come a time when it will be necessary to fight such a war, not simply on our own territory or on that of a "modern" nation. Therefore, the French experience and its contingent problems are worth the most carefully detailed scrutiny by our qualified military experts.

⁹ *Le Monde*, 10 July 1958.

¹⁰ *Ibid.*, 18-19 October 1959.



The Finest Hour of Marshal Ney



Major General H. Essame, *British Army, Retired*

GREAT artists, writers, and musicians have seen something elemental in Napoleon's retreat from Moscow. I can handle Marshal Ney's role in it during a brief nine-day period only from a military viewpoint. Of all of Napoleon's well-known commanders, Ney was, perhaps, the most colorful.

Two men, both fighting soldiers in the neighborhood at the time, have left accounts of the retreat which ring true: one on the French side, the gallant and flamboyant Baron de Marbot, commanding the 23d Chasseurs; the other General Sir Robert Wilson, the British Commissioner at the headquarters of Marshal Kutuzov, the Russian Army commander.

Marbot, after serving in most of Napoleon's campaigns from 1797 onward, eventually rose to the rank of lieutenant general and knew Ney well.

Wilson was typical of that amazingly self-assured and hard-bitten generation of British commanders whose portraits look down from the walls of the London military clubs with jovial arrogance. The British subsidized the Russians. Wilson's job was to see that his government re-

ceived value for its money. This he did with remarkable efficiency and, indeed, effrontery. He intervened personally in the operations, intrigued against and engaged in abusive arguments with Marshal Kutuzov, and even bullied the czar.

His book, *The Invasion of Russia*, was completed in 1825. Despite its grandiloquent and tortuous English, it reveals the outlook of an honest, straightforward, and simple soldier.

To reconcile the accounts of these two writers, both of whom had vast battle experience, is remarkably easy. The brief narrative which follows is what Marbot and Wilson say happened to Ney's rear guard between 12 and 21 November 1812.

Mid-November 1812 found the Grand Army reduced to approximately 50,000 effectives. When it started to withdraw to Orsha on 12 November it consisted of the units shown in the chart on the following page.

Napoleon and the Guard left Smolensk on 15 November. Eugene's corps, Davout's corps, and Ney's corps, the rear guard, were to follow in that order.

Military history is replete with inspiring stories. Marshal Ney's superb character and excellent qualities of leadership aided in sustaining the morale of the French soldier during the retreat from Moscow

At this time Platov and his 26 regiments of Cossacks were in close contact with Ney at Smolensk. Miloradovich's corps and Kutuzov's army were moving south of Napoleon's axis on Krasnoye.

On approaching this town, Napoleon and the Guard found that Miloradovich had reached the road just ahead of them. They, therefore, fought their way through.

The next day Eugene with his corps struck the same roadblock and succeeded in joining Napoleon but only after losing about 40 percent of his command.

Napoleon's situation on the morning of 17 November was desperate because the corps of Davout and Ney were just clearing Smolensk. Kutuzov, now southeast of

Kutuzov now moved his army westward around the outskirts of Krasnoye, thus threatening Napoleon's line of withdrawal.

Napoleon had no alternative but to abandon Ney and fall back on Orsha. Kutuzov, accordingly, much to Wilson's annoyance, decided to call off his attempt to surround Napoleon and to wipe out Ney instead.

Miloradovich's Roadblock

Ney blew up the ramparts and abandoned Smolensk on 16 November. Platov's Cossacks at once closed in on his flanks, front and rear, and a running fight developed.

About five miles east of Krasnoye the road entered a deep ravine. On emerging

Guard	16,000 (French)
1st Corps (Davout)	10,000 (French)
3d Corps (Ney)	6,000 (French)
4th Corps (Eugene)	5,000 (Italian)
5th Corps (Poniatowski)	800 (Poles)
8th Corps (Junot)	700 (German)
Cavalry	3,500
Artillery and engineers	7,000

Krasnoye, was in a position to fall with overwhelming numbers either on Napoleon or on Davout and Ney.

As Kutuzov's leading troops approached Krasnoye from the southeast, Napoleon promptly flung the young Guard at them. This diversion enabled Davout's corps to evade Miloradovich and rejoin Napoleon.

Major General H. Essame, British Army, Retired, is a lecturer in military studies under the auspices of the Universities of Oxford, Exeter, and Southampton. Commissioned in 1915, he served in an infantry battalion in World War I, and commanded an infantry brigade from Normandy to the Baltic during World War II. He retired from the service in 1949. He presently is a member of the Institute of Strategic Studies.

from it at about 1500 on 18 November, Ney's leading troops found themselves faced by a stretch of open country flanked by thick woods. A frost fog, indicating a slight thaw, was beginning to form.

Almost at once Ney's forces were swept off their feet by an appalling blast of grape from 40 guns. They had hit Miloradovich's entire corps, 12,000 strong, in a formidable defensive position on commanding ground with a good field of fire and secure flanks.

Faced with this situation, Ney, nonetheless, decided to force the passage and ordered the 48th Regiment of the Line to assault the position with bayonets. The French soldiers—tired, hungry, and numb with cold—sprang forward at the sound

of Ney's voice and carried the batteries.

The Russian infantry almost immediately counterattacked with fixed bayonets and drove the French back into the ravine. At the same time, the Hulans of the czar's Guard swept through the shattered ranks and captured the *eagle*.

Of the 650 men of the 48th Regiment only 100 returned. The brow and sides of the hill were covered with dead and dying. The wounded, as they lay bleeding and shivering on the snow, begged to be put out of their misery.

Ney now ordered Colonel Bouvier, supported by his remaining 12 guns from the height above the ravine, to renew the assault on the Russian batteries with several companies of sappers and miners. As this attack went in it was met head-on by the Grenadiers of Pawlask and repulsed. Ney then withdrew the remnants of his force into the wood.

Situation—18 November

Night closed in—a Russian night of more than usual bitterness. Ney was in deep forest, in an unknown country, with no food, no inhabitant to give information, and no guide. The vast number of wounded added to the general misery and confusion.

All hope of the rear guard rejoining the rest of the army seemed to have gone. Nevertheless, Ney decided to make the attempt by placing the Dnieper between himself and the Russians. The river was reported to be freezing. The problem was how to find the way there.

At this moment, Miloradovich sent a colonel to Ney bearing a flag of truce, calling on him to capitulate and promising to spare their lives. Ney's indignant reply is historic. "A Marshal of France does not surrender."

As the Russian colonel bore no written orders, Ney, with good reason, refused to consider him as a truce-maker but as a spy and made it quite clear to him that he would be bayoneted if he did not guide them to the nearest point on the Dnieper.

Accordingly, the wounded and baggage were abandoned and the column, guided by the Russian colonel under duress, moved off in silence following a stream which led to the river. The lights of the bivouacs of Denisoff's Cossacks half a mile away helped them to maintain direction, and after four hours of marching they reached the Dnieper. It had begun to snow.

The Dnieper Crossing

They found the river frozen but not hard enough to bear the weight of the column at all points. The first gun placed on it disappeared through the ice. The troops had to abandon all their remaining guns and vehicles. There were many cracks, and in some places the ice was so thin that it gave way when several men crossed at once. Ney had his men cross one by one. While they were doing so, the Cossacks closed in on the men waiting on the near bank and killed about 300.

By dawn, after this nightmare crossing in which many men vanished through the ice, Ney was able to muster 3,000 men on the far bank. They were close to a large bivouac of Cossacks. These they evaded, but soon afterward Platov himself appeared in strength on the plain ahead and opened fire on the column.

Ney moved into wooded country which ran roughly parallel to the Dnieper. The march, harried by the Cossacks, continued all day. That night the survivors reached a village which afforded a little shelter and some food.

Withdrawal on 20-21 November

Ney resumed his march through the forest at daybreak. Whenever his men attempted to move in the open the Cossacks fell upon them.

At 1500 they reached a point 25 miles from Orsha. Here the protection afforded by the forest ceased. There were reports of strong Russian infantry forces barring the way across the open country ahead. Two Polish officers now volunteered to go

aggage
ided by
moved
which
bivouacs
e away
n, and
reached
v.

ut not
of the
placed
e. The
aining
many
ce was
al men
a cross
so, the
ing on

crossing
ugh the
0 men
e to a
e they
himself
ahead

which
er. The
ntinued
reached
shelter

er
gh the
nen at-
ossacks

5 miles
fforded
reports
arring
ahead.
d to go

forward to tell Napoleon that the rear guard still existed and was fighting its way back.

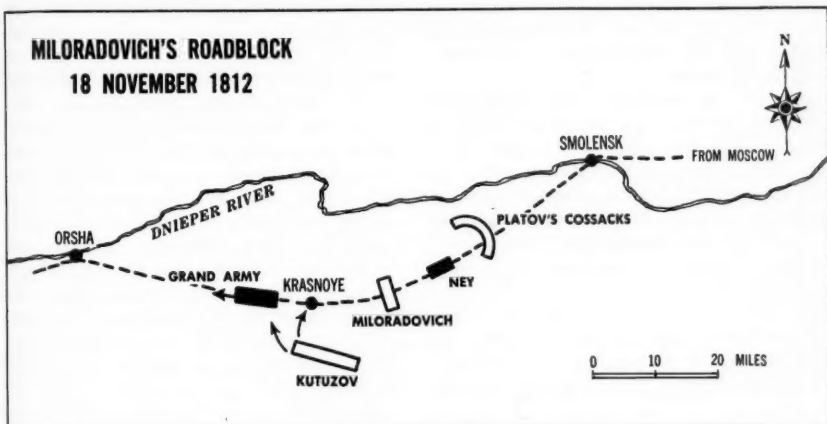
Ney moved off again at nightfall. A thick fog reduced movement almost to a crawl. To add to the difficulties of the exhausted men, the track climbed up a steep hill. At last they reached the crest to see to their horror a long line of bivouac fires stretching across the plain. It was indisputably a Russian corps established to cut them off once and for all.

To even the boldest, it seemed that the

were there. They set out at once and fought their way through to Ney.

Of the original 6,000 who had left Smolensk with Ney, barely 900 men survived. General Wilson, who was an eyewitness on the Russian side, says of Ney:

It is impossible to eulogize too highly the spirit, energy, and constancy exhibited by Ney through so many trials of these qualities. The whole achievement confers honor not only on Ney and his meritorious comrades, but on the military profession at large, which derives general luster



game was up—but not to Ney. His orders have a classic simplicity. According to Wilson they were: "To advance in speechless silence, and then to make a resolute onset in which, if they perished, their enemies might long remember that they had lived."

The column moved on. When the men reached charging distance of the bivouac fires, there was no one there. The fires were a Russian stratagem which had failed.

Rear Guard Rejoins Grand Army

Meanwhile, one of the Polish officers reached Orsha. Napoleon already had left the town, but Eugene and Davout still

from such transcendent exertions and exemplary valor.

When Napoleon, on hearing of Ney's safe return, exclaimed, "I have 200 millions in the vaults of the Tuileries. I would give them all for Ney's safety," he must have meant what he said.

Conclusion

The military history of nations other than France includes similar inspiring stories. The main value of this report lies in the light it casts on the morale of the French soldier under inspired leadership in the Napoleonic Wars.

In this instance the 48th Regiment of the Line suffered 70 percent casualties in

one assault but the remnant still were prepared to fight on. Three days later, after appalling suffering from hunger and cold, continuously harassed by a ruthless and more mobile enemy, the rear guard, although reduced to one-sixth of its original strength, was still a fighting entity, obedient to the orders of its commander.

The factors on which the high morale of the French soldier was based at this time merit discussion. They were six in number.

First, he was in no doubt of what would happen to him if he fell into enemy hands. He knew only too well that he would be stripped of his clothing and, in all probability, murdered.

Second, he marched. The Guard had gone all the way on foot from Paris to Moscow and was now on its way back. Each day's move demanded an effort of will and endurance. He accepted physical suffering as part of the nature of things.

Third, he was inured to a life on short rations. French arrangements for supply were haphazard and inadequate. The soldier learned to shift for himself. This, paradoxically, was bad for discipline but good for morale. He learned to use his individual initiative—if he did not, he starved.

Fourth, he had *égalité*. This he interpreted as meaning not an equal sharing of all comforts and miseries, but as the chance for every soldier, if good enough, to rise to the highest rank.

Fifth, he had blind faith in the military genius of Napoleon. He felt he was fighting for a cause—in his case vaguely embodied in the mystic word France—the concept which undoubtedly inspired De Gaulle when he made his great decision in 1940 and which is still a source of strength today.

Finally, he had confidence in and respect for his officers. Long war had ensured the emergence at all levels of men who could rise to the occasion on the battlefield itself. These leaders were acutely conscious not only of their privileges and status in society, but also of their obligations. The supreme example is Ney himself. When called upon to surrender he—a onetime noncommissioned officer—automatically rose to the level of his rank. "A Marshal of France does not surrender."

These factors do not necessarily provide a formula for the maintenance of morale in future wars. They do, however, provide a challenge to all who have to study the subject.

The importance to military strength of leadership of uncompromising quality is not by any means lessened by the advances in technology which have taken place. On the contrary, the importance of such leadership has been greatly magnified. These technological advances mean that war in this era could take forms and reach intensities which differ from anything in human experience. In addition to absorbing the great emotional and psychological shock of combat, men must now overcome the instinctive human dread of the unknown. The responsibility to imbue them with the determination and courage to do so rests squarely upon their leaders. This responsibility has increased in direct proportion to the intensity of the pressures which must be withstood.

General Lyman L. Lemnitzer

inter-
ing of
s the
nough,

ilitary
fight-
ly em-
e—the
ed De
cision
rce of

espect
nsured
n who
lefield
y cons
s and
obligat-
y him-
r he—
—auto-
rank.
nder.”
rovide
morale
, pro-
study

g
h
s
s
n
-
d
s
t

THE ARMY'S PEOPLE IN CHANGING TIMES

Lieutenant Colonel Anthony L. Wermuth, *Infantry*
Faculty, United States Army War College

IT IS no news that we live in disturbed times. Powerful forces loudly call for expenditures of energy in one direction, while others demand activity along irrelevant or contradictory lines. Against the suffocating conformity that presses us in on every side, more and more individuals and small groups react, sometimes with deplorable violence.

We have been told, by the poet W. H. Auden and others, that this is an age of anxiety. Speed—horizontal, vertical, and spiral—has become an honored achievement in itself. But is all the speed intended to get us to some worthwhile place, or away from something? As Churchill remarked, one can travel around the world in a matter of hours, but he does not see much of it on the way.

David Riesman in his fascinating study, *The Lonely Crowd*, examines the crumbling of old traditions and disciplines and the resulting changes in American values. James Joyce produces a 20th century classic the theme of which is rejection of family, religion, and homeland. A young Englishman of enormous reading, Colin Wilson, piles up an impressive collection of excerpts from a comprehensive sweep of modern literature, all of which echo the theme of his book, *The Outsider*.

Not all of these critics are exhibitionists or poseurs or malcontents. Some of them are, to be sure; but most of them are talented and serious. Being poets, they react sooner, more profoundly, more elo-

quently than most of us; but their reactions are mostly the same as ours and to the same things. The poets hold a sensitive mirror up to our times, reflecting legitimate reactions—whether their own personal ones or collectivized ones is often immaterial.

Tension versus tranquilizers, excitement versus escape, mass education versus anti-intellectualism, specialization versus breadth of culture—these are but a few of the modern dialectics familiar to anyone who reads or listens anywhere today. Many of the old sustaining truths are not as solidly sustaining as they used to be. Some individuals, reacting against personal responsibility for making intellectual choices, turn to extremely positive religious and political faiths wherein all the problems have readymade solutions which are binding on all members. Mass man has gained long-fought-for, long-deserved economic and political equality, but has not yet achieved maturity in many fields in which his voice is thunderous.

It is futile to hope that the Army can escape the effects of the sociological revolution of our time. We are inextricably bound up in it—as defenders of the Nation, as trainers of other defenders, and as citizens of and products of and contributors to these great American patterns ourselves.

Military Power

One sharp measure of the changed characteristics in today's Army is that of size

The Army is greatly influenced by the society from which it springs. Its continued success depends upon the adaptation of its personnel practices to the evolving ideals, standards, and desires of its people

alone. In a 1957 article in *Harpers*, D. W. Brogan, who has long expertly analyzed the United States and her ways, recalled that in 1925, when he had first come to America, it was possible to travel widely in the United States and never see any sign whatever of military power. The changed scope and status of American military interests today is reflected in Mr. Brogan's further observations:

We can be certain that the Regular officers of the United States will remain a very important class indeed. If they do not draw on young men of ambition and ability, the result may be disastrous. Yet how seldom is the problem of military education put high on the national agenda! Willy-nilly, the United States is a great armed power in which the role of the professional soldier is of the first importance and it is a role that has been neglected, for example, by political scientists like myself . . . the transformation of an America nominally at peace into one of the world's two great military powers is perhaps the single greatest and most ambiguous change in America.

In a society as complex as that of modern Western countries, it is increasingly difficult for the individual to attain breadth of culture, to become, like Franklin, a "citizen of the world," or, like Goethe, to take all human knowledge and activity as his province. Whole areas of life become more circumscribed and inbred, and it is difficult, as between science and the humanities, to bridge the gaps.

Lieutenant Colonel Anthony L. Wer-muth is a member of the faculty of the United States Army War College which he joined upon completion of the course in 1959. A graduate of the United States Military Academy in 1940, he holds a Master of Arts degree from Columbia University. He has held various command and staff assignments including duty with G1. A frequent contributor to the MILITARY REVIEW, his most recent article, "A General Staff for America in the Sixties," appeared in the February 1960 issue.

For example, the pioneer knew clearly that he shared the responsibility to defend his homeland; for nature and the savage were clear and imminent personal dangers. Today, since there are always specialists performing any important job, it is more difficult for the ordinary citizen in a protected urban environment to see that, even though he normally may inhabit circumstances far removed from national security matters, he shares the collective responsibility for his own and the community's security. "Why, that's somebody else's job," he may feel. "Look up a 'military specialist' in the yellow pages of the phone book. Emergency? Well, look up 'emergency military specialists'—there's every kind of specialist in there. But don't bother me; it's not my business."

As the Army has expanded in size and in complexity, it is clearer now than it used to be, on both sides of the civilian-military relationship, that national military policy is inextricably interwoven with education, law, industry, business, labor, and a host of other fields often considered in the past to be none of the Army's affair.

The Changing Pace

Some people do not like this, and wish it were otherwise. "Oh, Lord," wail the woe-sayers. "This Army is not the Army I joined up with. It's losing its soul. This Army is becoming a body of jobholders, not professionals who have found their true way in life! Change all this, Oh, Lord! Change all the people! Give us back the Old Army, where the way was clear every day and every year!"

The truth is that it is not at all a question of a "new" Army. To the extent that there is newness in the situation, it is a "new" America, a "new" world; and the Army, like every other long-lived institution, is trying to trace out a new path amid old acres. We have no recourse but to try to understand; whether we would have chosen them or not, these are the

times in which we live, the only time we have.

It used to be fashionable to speak disparagingly of the Old Army as sleepy. More leisured, yes—but all life in these United States, as well as everywhere else, was more leisured in those days. It is impossible to believe that the hundreds of great American military leaders of World War II could have been produced by an Army whose outstanding characteristic for 20 years had been sleepiness. A *Life* magazine editorial on 2 November 1959 stated:

Churchill marveled that the tiny U. S. Army of 1939, starved and despised for two decades, could suddenly produce such a wealth of command talent, capable of handling enormous masses [of men and materials] and of moving them faster and farther than masses have ever been moved in war before. The marvel was possible because of the intense self-discipline in military science of a thin generation of dedicated professionals like George Marshall who, through their personal preparedness, made up for the lack of national preparedness they so rightly deplored.

The pace has picked up everywhere, and so it has inevitably picked up in the Army, too. The pace of electronic development alone exceeds in the past single decade, by many times, what had been accomplished in previous centuries. The influence of the atom-splitters is only beginning—again, not only in the Army.

Some aspects of the fast pace are not endearing. While large segments of the population beat the drum to reduce the working week from 40 hours to 35, or even 30, other segments, such as numerous military and civilian officials and associates in the Pentagon, average 70 or more hours a week at their desks or "lathes." Years pass in this fashion, while the families of the principals concerned grow up "minus" fathers, for whom life is a high-speed, dawn-to-dark treadmill with

little grace or depth. Many military men today, despite the crying need for greater balance and wisdom to be brought to problems, are swallowed up more and more narrowly in the maelstrom of daily decision, all-day decision, no-time-for-second-thought decision. Is the nature of modern-world problems forcing man to this headlong pace, or is the growing habit of moving in a headlong pace forcing the treatment of problems to go along?

Quality or Quantity

To some extent, this long-hours-at-the-grindstone custom is a sort of hair shirt the officer wears; he curses it, but secretly expects it to be admired. In the Pentagon the degree of "hot"-ness of one's "shop" is somewhat contingent upon the number of overtime hours averaged by its members. A shop whose officers average 25 extra hours a week is pretty hot, but obviously not as hot as one in which the average is 40 or 50. Perhaps each finds secret satisfaction in accepting it, since it cannot be changed. But some of it needs to be changed!

Granted, professionals tend to become engrossed in their fields and jobs around the clock. There are periods during any professional career when a heavy workload, carried with distinction, separates the sheep from the goats. Certainly, great pressure today comes from the speed and number of events, the unrelenting crises, above, beyond, and including the cold war. Nevertheless, crisis is fashionable, and unrelenting presence "at the desk" is expected. Quality of work seems sometimes to be not nearly as much a matter of concern as quantity of hours devoted to it. WORK is a fetish.

Yet a good man is a good man, in war or peace, in crisis or serenity. Most men in war act according to the traits of personality and character formed in the long years of peace. *It is in peace that we develop the capacity for leadership.* We do not do this by desk or field work alone.

Particularly is it true that at a desk, man does not expand; he contracts. Art, music, literature, science, philosophy, and other expanders of the mind and spirit are what increase one's capacity to understand—and, yes, frankly—to *enjoy* life. But so pervasive have our habits of seriousness and grimness become that enjoyment has become almost suspect.

Despite the crises and the cold war, some way must be found for more professional men (for example, for Army officers) to grow into whole men, to have

It is here within all the influences that shape character that motivation, volition, and leadership flower. Leadership is, in a sense, merely the dynamic exercise of character.

Another pertinent major change in American life is the Army's loss of uniqueness as a withdrawn, highly organized society, with internal standards of excellence and extreme interest in development of its own leadership.

In a recent book, which has attracted the careful attention of serious reviewers,



Some way must be found for Army officers to grow into whole men, to have time and approval for thought and reflection, and to understand the changing world and the Army's place in it

time and approval for thought and reflection, to participate personally in the education of their children, and to understand the changing world and the Army's place in it, and their place in life, both inside and outside the Army. It would pay dividends if the Army were to give even more encouragement and opportunity to the individual to develop, not only his body and job skill, but his mind and his spirit, by means other than on-the-job training.

The main analysis is devoted to typical bright young men who are carefully selected and screened and tested and moved along in a great modern organization—a group, a team, to which they give their intelligence, energy, and devotion. The book's author does not admire this aspect of modern life, for he feels that individualism is thus stifled and that society is the loser, on the basis that real progress is invented only by the gifted individual.

es that
volution,
is, in a
cise of

nge in
loss of
hly or-
standards
t in de-

tttracted
viewers,

time and
and the

o typical
efully se-
moved
nization-
give their
tion. The
his aspect
individual-
ety is the
progress is
individual.

The significant point is that the protagonists of this account are not in the Army, but in modern industrial corporations.

Here is an example of the competition faced by the Army today, even in its nature as a dedicated internal American society. The military services, and many other fields, now compete for able young men in ways and to a degree that were hardly foreseeable a generation ago. More able men are available, but the supply may not be keeping up with the demand.

We have noted the erosion of many shibboleths, of the gradual shifting of many moral codes, and, in some instances, of values. It is not yet certain that all of this metamorphosis is bad; perhaps we shall have to wait longer to determine whether many of the discarded beliefs were not better lost. Disaster does not yet threaten. A society which continues the ethical self-criticism of modern America probably will not abandon morality entirely.

Competition

Another facet affecting the Army is the competitive nature of the pursuit of success in modern life. In these days it is with more and more surprise and puzzlement that one comes across, with decreasing frequency, lives devoted to unselfish pursuits—those who, at great or total sacrifice of time, money, comfort, or other personal interests, devote themselves to the care of the poor, the lame, the aged, the insane, and other casualties of the body, mind, and spirit. There are still well-known altruistic enterprises in our affluent society, but in earlier times they were prominent in the foreground in every generation and community. The Army, which itself has always had an honest, basic concern with the concept of service, cannot help being affected by its source society, where *service* is less and less regarded with admiration, appreciation, and—above all—participation.

Competition is not always healthy.

While the Army is not a competitor with other walks of life in many respects, the dynamic intermingling of more and more aspects of national life brings the Army up against some private interests, and vice versa. This may be regrettable, but appears unavoidable. To be sure, military interests should not run roughshod over the interests of private citizens or private groups; yet (and here is the usual stumbling block, in practice) neither is the reverse acceptable. The military are sometimes at the mercy of highly organized, vocal minority groups who muster enough influence to satisfy the interests of the group at the expense of the military.

Officer Status

Perhaps too much has eroded of the "feel" of being an officer; especially for younger officers and others who are not general officers. Perhaps too much has been eroded of the reasonable privilege and prestige that used to attend an officer's status, particularly as he increased in service and seniority, after years of waiting in line, and sacrifice.

The gradual loss of personal service is one kind of erosion that causes the benefits of technological advances and specialization to be somewhat mixed blessings. The cost of personal services has skyrocketed until they have become one of the highest-priced facets of modern life. In turn, like many other professional executives, officers "do it yourself" or do without. Today, the officer scrubs the walls, paints everything that gets painted, and generally does all of the heaviest manual labor around the house.

I do not mean for a moment that to labor "close to the earth" is in some way demeaning. A certain amount is healthy and democratic and all that—and, as has been said, may in rare instances be ennobling. But a lot of it certainly does not help him devote time to professional reflection and growth.

Still, since a similar situation exists so

widely and generally today in many walks of life, this situation may be tolerable when it occurs *outside* official duty. But manual chores as part of officer *duty* is hard to reconcile; one of the most offensive areas for this sort of thing is the Pentagon. I have seen four able lieutenant colonels desked in a room with one typist, all of them on a racing treadmill. The poor girl pounded away from morning until night in the impossible attempt to keep even with the workload. Of course, she had to be occasionally supplemented by extra overtime workers at night (when funds were available), or by farming part of the work out to other offices from time to time. The point is that the officers could not afford to pry her loose from the typewriter, or the office presumably would collapse. As the result, the four lieutenant colonels were never able to save other time and effort by dictating; they wrote everything out in longhand; they had to be their own messengers to carry anything to or fro (they could not get an official car, even though it was official business, unless they were "carrying something they could not carry on the bus"); they picked up stacks of mimeographed material, and they put them together, stapled them, and delivered them, too. Efficient? Of course not.

Management survey experts had decided the typist-to-officer ratio and undoubtedly prided themselves on their expert calculations. That the system worked at all, however, had nothing to do with organization or arbitrary staffing ratios. It moved forward simply because the lieutenant colonels worked every weekend and late every night, averaging at least 60 hours at work every month in excess of normal working hours. As they repeatedly stapled pamphlets together, a job any high school sophomore can learn in a half hour, is it any wonder these lieutenant colonels sometimes wondered where went that satisfaction in filling a field officer's role?

New Frontier

Another marked characteristic of the context surrounding the Army is the change in its appeal. Traditionally, armies depended heavily on long-time, or perennial bachelors. They were literally soldiers of fortune, independent city-haters who preferred the all-male Army society and shunned other kinds except in "extracurricular" interludes.

Today, we have an early-marriage generation. Home and fireside and children apparently mean much to today's young people. And the Army's young people share these emphases.

There is still adventure waiting over the horizon for many young men—in space, in the few still-little-known areas of the world. But other forms of adventure are coming to the center of the stage—adventures of the mind, of the laboratory, of creative and imaginative political, social, and technological innovations sorely needed.

As the Army's *Explorer* pioneers through space, signaling informative details about a great scientific achievement, it can be hoped that some kind of equally instructive device will be placed in orbit by the Army to explore, wherever possible, improved personnel methods befitting the service that leads the way in so many respects toward the 21st century. Much has been done already by the Army, which is at least as progressive as any other service in these matters. Some innovations, like the Enlisted Career Plan, are great steps forward. However, the pace of change increases everywhere; improvement in personnel procedures needs to accelerate as fast as improvement in other fields.

As we observe the way man handles lakes and forests, ships, aircraft, nuclear power, and the productive soil, we properly admire the great skill he has undeniably acquired. Our admiration of him is prevented from becoming total, how-

ever, when we realize that of all the things man handles, possibly the least skill characterizes his handling of men.

All of the foregoing, and much more that could profitably be said, serves as background to highlight the importance of one function which the Army, as well as every other great institution, must perform in the future better than in the past: personnel management. Complex and uncertain as future warfare will be, we are certain to devote reasonably adequate funds, research, development, analysis, emphasis, effort, debate, production, testing, and training to material means and organizational procedures. Are we equally certain to devote adequate attention to people and their management?

Personnel Field

Whether or not one agrees that, despite thermonuclear warheads and intercontinental ballistic missiles, personnel is the most important field in the Army's future, one can hardly disagree that its importance is steadily increasing.

The personnel field is the most complex of all. That we are beset with personnel problems that remain unsolved, or poorly solved, or never satisfactorily solved, is no reason to belittle the skill and energy with which those problems have been and are being attacked. Possibly the reason that they remain in an unsatisfactory solution status is simply that not *enough* skillful or energetic people have yet been applied to their solution.

To be sure, it is largely an artificiality to speak of handling personnel as a separate function, for every other exercise of military responsibility affects the total success of personnel-handling systems.

Therein may lie the root of the trouble, for no one in the military business should consider himself outside the responsibility for handling personnel as equitably and efficiently as possible. All Army officials are *inside* the personnel field.

It is with this viewpoint that the re-

mainder of this article concentrates on personnel-handling aspects of the Army's future, particularly in relation to officers. Some areas seem improvable, and in reference to some of these, suggestions are offered that are intended constructively.

The finger of criticism cannot be pointed at the Army as being solely responsible for all aspects of these situations. Some of the difficulties are written into law. However, legislation is not always an effective disclaimer (that is, an argument that "the Army must comply with the law"); for much personnel legislation is written exactly as the Army asked for it in the first place. Nevertheless, certain aspects are beyond the Army's power to change by changing its own regulations. The Department of Defense, the Congress, the Bureau of the Budget, and still other agencies sometimes hinder the Army's attainment of certain policies. And some faulty conditions are traceable to acts, such as less-than-honest rating, by the rank and file in the Army rather than to the Army or its regulations.

Still, some situations are wholly within the Army's capability to improve; for others, improved solutions can be advocated again. It is the Army's people who are involved in all these situations. For better solutions, whether attained by internal directive or external influence, where else but to the Army should its people turn?

The Chance Factor

In some respects we seem to be still saddling many 19th century personnel procedures upon a 20th century Army. Man may not have changed his basic nature, but he has certainly changed, for good or ill, many of his values and his responses to stimuli. Some of our personnel procedures remain in the category of the grab bag, the hit-or-miss, the whimsical, the bouncing ball, the lucky star, and other systems of chance.

Among the many facets of Army per-

sonnel handling, there are several broad influences and several specific procedures which can bear profitable discussion; for example, the factor of chance—in ratings, in assignments, in opportunities. Take the factor of chance in assignment of, say, the next 400 lieutenants to pass through the basic course at the US Army Infantry School, all Reserve officers serving a two-year obligated tour after finishing college. Out of a class containing the first 200, twenty may get miscellaneous assignments, but 180 are assigned to Korea, where good troop duty is available, but not much else can be said for it. Of the subsequent 200, however, only 20 have to go to Korea, while the rest go to desirable areas like Germany, Panama, and Hawaii. It can be assumed, however, that each 200 increment would have the same number who would prefer Korea or Germany, for various reasons that seem good to them. However, their assignments are *sheer fall of the dice* for most of them!

For that matter, is it necessary that assignments normally come as a surprise to everyone? Perhaps for all officers, perhaps at least for those in field grade, a system could be set up for advising an officer of the assignment or assignments for which he is being posted, and requesting his comment if he cares to make any. Special cases, urgent demands, unavoidable last-minute changes—all may be exempted from the system. But the great majority of normal reassignments ought to be adaptable to such a system. Here is an instance of a field in which improvement has been started.

Another area in which great improvement is desirable is in achieving comparable conditions among all services—in number and quality of housing, in furnishings and "housekeeping" services provided, in promotion opportunities, in conditions under which families travel, in procedures for running clubs, and many others. The Department of Defense grad-

ually is moving into this area. The movement is a healthy development that eventually will benefit all services; yet each service continues to resist this trend on one issue or another, primarily on some treasured practice or favorable legislation that was intended in the past to give one group advantages over others. The sooner this type of favoritism is discarded, the better it will be for the Military Establishment as a whole, as well as for the individuals in it, regardless of uniform.

It is known that G1 offices of the Army have initiated research into several fields, such as the possibilities of using the more timely and accurate information developed by electronic data processing machines. To be sure, the quality of the machine's help is largely dependent on the quality of the input. For a while there was a danger of depending too much on the machine; for example, in being satisfied to accept the machine's results without "hand tooling" to correct the discrepancies created by a machine applying limited criteria to large numbers of individuals.

However, the data processing machines are coming into their own. As more and more data in usable form is tabulated concerning each person, the individual emerges from the mass, and distinction and accurate identification are possible. Already, the machines are outstripping any hand method in capability and comprehensiveness; apparently the potential benefits to the personnel handling system are impressive on any scale.

Vocational Analyses

Good advantage can be taken of the work already accomplished in and out of the Army in such fields as vocational guidance, in the analysis of an individual's strengths and weaknesses, and in the identification of types. For example, we assign the wrong people occasionally to "particular" assignments. Better advance analysis of candidates of any rank,

through tests and otherwise, might eliminate more of these poor choices ahead of time. As a desirable possibility, could "vocational" analyses be made of all candidates for commission, for example, to discover likely strengths and weaknesses for the information of both the Army and the individual?

As a matter of fact, the Army is an outstanding leader in the vocational-analysis field, envied and copied by numerous large organizations. So far, its activity has been confined largely to enlisted men. It may be time to extend similar advanced coverage to officers, especially young officers. The basis for assigning candidates for commission to branches, for example, often is simply dependent upon the Reserve Officers' Training Corps unit one served in; or even one's personal choice of branch often is dependent upon fuzzy impressions of one's own strengths and of the kind of work done by officers in the various branches. The tests could be repeated every 10 years or so, to confirm (or not, as it may turn out) both the test and the individual, for some people shift even their primary fields of interest over a decade.

The analysis of personality is at an elementary stage, as is the recording and comparison of analytical data, such as the measuring of performance, and the comparison of performance measurements. Even less "advanced" are our ways and means of measuring potential, of assessment, of predicting performance.

Performance versus Opportunity

The interrelationship of ability, assignment, opportunity, and potential are not nearly well enough understood. As has been often remarked, a man's records only partially reflect his ability or potential. They reflect only performance limited to the opportunities he has had. Is every officer who has been on the General Staff a better staff officer than every one who has not? When a war comes and the in-

dividual is assigned to an isolated station bypassed by the chance of war, should he refuse to comply with those orders? If he complies with his orders, should he be penalized for the rest of his career?

Should an officer who has gotten absolutely top ratings as a general's aide for the past four years be considered ahead of an officer who has been assigned to troops and staff jobs for the same period and who got very fine ratings but not top ones? Are the definite types of early skyrocket and late bloomer actually recognized, and does the system provide for their recognition? Should every officer stay in the same order of consideration for 15 or more years? Should the system take cognizance of the officer who is a skyrocket, a beaver, an impressive dynamo, for five years but who then coasts? And should the system provide for the officer who matures slowly but who inexorably passes the early pace setters, yet who is shackled by the fact that the order of consideration for the first 15 years is inexorably cast by the order set up in the first year or in the first five years? Should the first man in line for consideration for selection to captain still be the first man in line when selection to lieutenant colonel comes around?

At what stage should one seek to leave troop duty and gain staff duty? What level of staff? What is the real value of service in the Pentagon? When? How early should one commit oneself to specialization? Is it expected that it will still be possible to develop a "universal type" of Army officer after 10 more years have passed? What is the longest interval between troop assignments that a line officer should put up with, or get away with? Who gives the most accurate appraisal of an officer's value in an assignment; his superiors, his subordinates, or his peers?

Some of these questions can be answered. Perhaps a project can be undertaken to generate frank, clear advice for an officer at each five-year or seven-year

point of a 30-year career, rather than provide all sorts of analyses at the beginning of a career, but little after its inception. Perhaps *frank* discussions could be developed of the advantages and disadvantages of various type jobs—unit staff officer, division staff officer, Army General Staff officer, service school instructor, and aide—not job descriptions, but the weight and importance given to them by the personnel system.

Staff specialization in the G1 field is long past due. The logistics career field, as recently adopted by the Army, with its recurrent assignment of specialists in increasingly more responsible logistics positions, appears to be just the type of medicine the doctor should prescribe. And the program should specifically provide for conscious, rounded development of those participating in it, including careful, conscious *training* in civilian universities and staff courses, in contrast to practices by which an individual may be assigned to G1 on two occasions, but on one tour he spends three years in manpower control, and on the second, three more years in manpower control. In other words, the system should not only see that those in the career field return to G1 assignments, but that the selected specialists get varied internal assignments to make the most of the opportunity.

On occasion, one may refer to the officers in G1 assignments as "personnel experts"; whereas not all of them are experts, by any means. Some are experts; others are not, although they may be experts in something else, perhaps brilliant staff officers or commanders or administrative whizzes or specialists of some sort—perhaps in statistics. It is evident that, on the whole, G1 offices house some of the ablest officers in the Army. More are needed, however—many more officers of the highest attainments. But always with a proviso: if he does not understand the special nature of handling *people*, he should not be assigned to G1, no matter

how many decorations he wears or how close his OEI (Overall Efficiency Index) is to 150.

Personnel Policy

One recurrent handicap is inconsistency in policy. The group experience and attitudes of the officers who currently exercise influence over personnel policy determine one policy that may be announced this year. Next year, the policy may be reversed, and two years later an entirely new system substituted. Yet a fuzzy decision made this year may adversely and irrevocably determine many an individual's status for the next 15 years.

Part of the difficulty in enlightened personnel handling in the future will be that it is not as simple as it once was to impose ready acceptance for a policy that affects a man's status and his family, especially if it is believed to be bad policy, whether announced by a four-star general pounding a desk or a staff officer saying, "It's none of his business how we arrive at the assignment of quarters. It's the post commander's order. That's all he's entitled to know."

Today, all kinds of influences bear on the military person within his less isolated military world; the radio, TV, and instantaneous worldwide communication surround the military family as they do all other citizens' families. Values are changing radically. No one would assert that all the changes are for the better. But, good or not, they are taking place, and the trend appears to be one that will continue indefinitely.

For one thing, the great majority of men for whom personnel policies are devised today are simply more astute and more outspoken. Educational levels have increased greatly, from that of the private soldier to the officer levels in which now reside several hundred doctor's degrees and several thousand master's degrees. Almost two decades of worldwide travel have increased the level of sophistication among our military personnel.

Almost all walks of life have felt the irresistible surge of influence of the subordinate, the employee, the junior, in having a greater say in policies that affect his welfare and living conditions. This is not a sentimental view; the sociological revolution in progress for decades inevitably affects the Army. It would be a mistake for the Army to ignore it, even if the Army wanted to. This trend can be fought, but it cannot be licked. It would be better to join it and to direct it intelligently. As one with recent infantry command experience, it seemed to me that all the woe-sayers were as wrong as they could be. I found it harder to reach the more "sophisticated" soldier than it used to be, but not much harder. And once reached, he is as good material as we have ever had—in my book, much better than we have ever had. His basic discipline is sound, although the outward appearances have changed somewhat.

It is difficult to express this point without running the risk of being misunderstood within the Army as advocating the abandonment of discipline or something like that. However, I will run the risk. Certainly, I have no doubt about the need for highly disciplined units and individuals on the battlefields of the future. I would not attempt to gainsay him who insists that the discipline required will be of a higher order than that required in the past, so as to be able to move with speed and alertness, with endurance and confidence, amid the megatons. The development of such discipline is *not* inconsistent with more enlightened personnel handling.

Transformation

Some of the old virtues have undergone a transformation. The type of the earlier-generation soldier who was content with austere pay and living conditions; who stoically absorbed and absolved, not only the hazards and hard knocks of military life but also the whims and inconsistencies of Army administration; who received the

orders affecting himself and his family as some kind of revelation from On High—well, that kind of fellow is disappearing, if he has not already gone forever. It is a reasonably true generalization that people accept less on faith and trust today—at least, on any unquestioning faith that those in authority invariably know what they are doing, or on trust that the powers that be always arrive at the best solution for the individual.

Today, better educated, better informed, less inhibited, the military man, just like his fellow-Americans in other walks of life, is less inclined to suffer uncomplainingly the whims of administrative decisions that cost him money, time, position, and other perquisites, particularly when he is pretty sure the decision is a poor one, or a wrong one. The worst reaction the good soldier can take is not to write letters to the editor about it, or visit the Inspector General, or get Mom on a soapbox to tell an indifferent world about it. It is to seek another walk of life.

This does not mean that the Army should initiate a system of taking out one's morale every day and measuring its pulse and temperature. Nor do we need to provide for committee meetings or conferences or debates on the battlefield, or encourage the pollyanna personality to multiply.

What we do need is a universal realization by every official in the Army of the things that are changing and those that are constant among today's influences, and that handling personnel is sufficiently different from handling all other military things and actions that the impact on the Army's personnel should be given careful consideration before every major Army decision is made. If there are no special personnel implications, well and good, nothing is lost. If there are substantial personnel implications, they need to be thoroughly weighed by the operations and training and logistics experts, as well as

by the personnel experts, and most of all by the commanders.

Perhaps the most damaging of all current aspects is the loss of the Army family feeling previously engendered through post life. All services have made strenuous efforts to improve housing, but improvement is too slow. The Army is now getting officers in levels as high as brigadier general who have never, or seldom, lived on a post in government quarters, in the midst of concerted activities along a larger

distances away. Is it herein that the main reason lies for faltering Army spirit? Perhaps so. Perhaps nothing else the Army can do to regain that spirit will serve half as well as providing good quarters (that is, roomy, well-built quarters, with adequate facilities) on Army posts for all its people.

Performance Rating

Other improvements are needed—for instance, in rating of performance. No ef-



Insufficient housing denies many Army families the advantages of Army post life

purpose of service to the Nation, amid sensible, controlled upbringing of children, within daily sight and walking distance of the flagpole, within the nightly sound of "Taps."

From the ranks of colonel down, few of our officers have spent more than a third of their commissioned years on posts. Some with almost 20 years' service have never lived on an Army post, but only in the disparate, impersonal, competitive commuters' villages at variable

fiency report has ever been satisfactory to most of the Army, especially after a particular form has been in effect for a couple of years and its use corrupted. An initial contributor to its corruption is the rater who rates without absolute honesty, objectivity, and fairness to the Army and the man. Other causes multiply the corruption. Scoring systems are kept secret, so that after a couple of years some officers learn how reports are scored and so are able to have them reflect what they

main
spirit?
the
will
quar-
ters,
posts

want to say; other officers are never informed of the scoring system, and do not know what effect their reports have. The result is that after a few years, some ratings are too high, and others are too low, with inequitable effects for years afterward on the officers concerned, for preferment, assignment, and so on.

or in-
to ef-

It seems to me that two scales are wanted, but for years we have been trying to make do with one. The Army really wants to know both an individual's "absolute" value and his relative value. The relative rating is desirable and useful, that is, the order in which one officer's worth stands in relation to the worth of all other officers. But some absolute rating is desirable also. If in such a scale, 50 percent of all officers are superior or 90 percent are excellent, what is wrong with that? If reasonably true, it speaks well of the officer corps, and represents a desired state of affairs. But if only some variant of a relative rating is used in the interests of achieving a bell curve on a chart, the lower end may force able officers almost to show cause why they should be retained; whereas a companion "absolute" rating would itself show why they should be retained.

life

ctory
ter a
for a
d. An
is the
nesty,
y and
cor-
secret,
ne of-
and
they

Similarly, we list almost a dozen type positions for numerical rating ("command a tactical unit," "serve with Reserve components") which is well and good, so far as it goes. We hope the narrative portion will describe the individual's differentiated strengths; but most narrative descriptions are too generalized. It seems to me that a clear narrative assessment ought to be included of the individual's strengths and weaknesses in the primary function of the officer, the running of affairs. (I am trying to avoid semantic confusion among "command," "executive function," "leadership," "management," "direction," and similar terms, all representing relevant aspects if clearly used, but which tend to be substituted freely for each other, depending on the vocabulary of the rater.)

The two principal functional areas for an officer are "command" and "staff," but these are loose terms.

I repeat that what the Army wants to know primarily is, "Does this officer direct affairs competently?" A separate clear portion of the efficiency report should be reserved for eliciting this information both descriptively and numerically. If not pertinent to the job he is being rated on, the section can be left blank, and other sections used. Certainly, the Army wants a clear, specific evaluation of every combat arm officer's ability to command a line outfit. It also wants an evaluation of his ability to command (lead, direct, or what you will) any other type of agency in which executive ability is demonstrable. Similarly, evaluation of nonline officers are desired as to their ability to run noncombat units, administrative agencies, or any other directed group.

In addition, the Army wants evaluations on an officer's performance in any type of job covered by the loose term "staff officer"—meaning an assistant to someone else who is executing direction. Still another whole grouping of jobs seems to fall into a loose category of "specialist"—jobs which involve neither executive direction nor assistance, such as technological research, writing, historical research, or medical specialties.

Irrespective of these areas for specific evaluation, the Army also desires evaluation of the individual's personal qualities. It is not that the reporting forms used so far do not permit comprehensive evaluations of these differentiated areas. They do permit them, and some forms are actually completed with adequate comprehensiveness. But the form does not force specific evaluations, except for numerical ratings of various possibilities, most of which are guesses, since the rater has usually observed the individual in only a few of the type jobs listed. Only one narrative evaluation is required, and in the nature of things it tends to be a

catchall that concentrates on the individual's personal qualities. Some efficiency reports on officers actually commanding tactical units, for example, say a lot about the officer's personal attributes but remarkably little about his ability to command.

Personal Qualities

Perhaps not the most important personnel field, but one of the personnel fields susceptible to the most improved solutions, is the system for finding one's place on the temporary and permanent promotion lists. Future policy is difficult to discuss, for no one knows what it will be.

The Army's structure of temporary rank is not quite unintelligible, but how should one describe it? Even to discuss it is to tread on a delicate path that remains largely indistinct and inconclusive as it winds amid different-hued patches of Personal Evaluation, gloomy stretches of Sour Grapes, haphazard areas of Right Place and Wrong Time, tangled vines of Survival of the Fittest, and a whimsical mist that waxes and wanes and smells suspiciously like Lady Luck. It will not be denied even by many of those who have benefitted most by the Army's "system" to date that large sections of the present grade structure of the Army are jerry-built out of patchwork solutions.

I will cite three instances:

1. Under one program, officers have been brought into the Regular Army and given credit in rank for as much as 10 years of service of which they need not have performed one day. Under another program, officers have been brought into the Regular Army but denied rank credit for as much as seven years of full-time commissioned service that they had actually performed.

2. Surely, the opportunity given to some particular vintages of thousands of officers (good men, unquestionably) in such a way as to determine their rank solely by their age put at an indefinite disad-

vantage other thousands of officers (also good men) who were senior to them in several or all categories of rank, service, education, training, experience—in fact, in almost any category but age. This was simply done, on a like-it-or-lump-it basis. One of the most incredible comparisons I know concerns officers X and Y. Officer X was a civilian until drafted in 1942, was commissioned in 1943, and was a first lieutenant in the fall of 1945, after the war ended. Officer Y was commissioned in the Regular Army in 1940, commanded a regiment in combat during the war, and in the fall of 1945 was a colonel with a Distinguished-Service Cross. Officer X was brought into the Regular Army in 1946 and inserted into the Regular Army Promotion List 4,600 files ahead of Officer Y solely on the basis of age. He is still there. (Many other thousands were integrated by service; but there is nothing questionable about that.) Incidentally, in 1958 Officer X was made a permanent colonel, while Officer Y remained a permanent major until 1960. On the other hand, Officer Y had been reinstated as a temporary colonel back in 1952. What relationship does the Army desire here? How could anyone tell?

3. During World War II at least two ingredients were essential to promotion to any grade—opportunity and ability. Of the two, opportunity was unquestionably preeminent, for without it, ability unlimited meant nothing. Of all the systems that might have been used later, it was this haphazard system, the least reliable or equitable of all, that was used (and to some extent remains) as the root area for postwar promotion systems. Notwithstanding, a lesser aspect of the World War II system was that the dates of rank could vary by months between two people originally recommended on the same day—between an officer in, say, the Aleutians, where three months might elapse from the time an actual promotion was forwarded from the unit until it was returned from

Headquarters, Army Ground Forces, and an officer in, say, Headquarters, Army Ground Forces itself, where the entire process could be completed within a few days. Yet, for *three years*, from 1952 to 1955, as the identical zone was established three times without extending it one day, lieutenant colonels dating from 1 January 1945 were excluded from consideration for selection to colonel while those dating up to 31 December 1944, *one day earlier*, were included. Regardless of the numbers involved, the zone concerned should not have been repeated without extending it at least a month or two. Of course, a line must be drawn somewhere; but especially when it is repeated, it is inevitably (and reasonably) subject to discussion as to whether or not it was a well-drawn line.

On the whole, the foregoing are only a few examples among many that might have been selected. Because its features have lasted so long, and because rank is the major element of status in military life, determining one's opportunity, assignment, pay, and (to some degree) satisfaction in service, I suggest that the grade structure of the Army is not just another personnel problem but is among the most critical problems that need special attention and better solution.

Since 1940 the Army has lived almost entirely with a rank structure of temporary rank and promotion which has borne only coincidental relationship to the permanent rank structure. The simplest arithmetic shows that this situation has existed for 20 years, a not inconsiderable number of years, a not negligible proportion of a lifetime, let alone of a career. Since it is the temporary rank structure that we live in, and will evidently continue to live in for five or 10 more years, it may be time that informative "career" policies were developed for the temporary grade structure in which the Army actually lives. Nor would it be a worthy course merely to drift along, to adopt as the cure the passage of time, the philosophy

that in 15 or 20 more years "all these people" will be dead or retired, anyway, and that the problem will have solved itself by the departure of the people involved. It seems not unreasonable to suggest that G1 could at least place an explanation in each officer's record file, especially those caught by changing policies, for the edification of appropriate boards.

There are other major areas in which improvement is greatly to be desired. As already pointed out, not all the desired improvements are wholly within the Army's power to accomplish, but many of them are. For example:

Instability and inconsistency.—Some programs and approaches are changed every two years; witness the enlisted grade structure and the continually changing status of the noncommissioned officer and the "specialist" since 1940. Titles, stripes, pay rates, scope of authority, and varying interpretations of each follow one another before the Army gets used to the previous one. Concerning some overadministered Army personnel policies, there would be positive value in settling on a sound solution, and then letting it alone for a number of years.

Administrative convenience.—This problem "solution" is an excuse that is sometimes used for accepting a proposal that may admittedly treat inequitably, for example, "only" 200 people out of a total of 4,000 affected by the proposal. It may be said, "Oh, 200 are only a small minority in this problem." Poor thoughts, indeed! Luck, timing, accident, and inadvertance will work enough inequity. No solution, whether in housing, assignment, promotion, recognition, or whatever, should be accepted that is *known* to work additional inequity on anyone.

Secrecy.—One of the great curses of the personnel business is the proportion of actions carried on behind no-access barriers. This includes the opportunity for superiors to make changes in an individu-

al's records without his consent, sometimes without his knowledge, such as changing his military occupational specialty (MOS), or forwarding his application for something but marking it "disapproved" without telling the individual concerned, or taking out of or putting into one's record career-determining remarks of any kind without the subject's knowledge. Boards meet and proceed according to basic criteria that vary with policy. One year, the stress may be on youth, but two years later on seniority, or the stress may shift from combat experience to staff experience to decorations to graduate degrees to rating by general officers, according to the varying views held by those who succeed each other in setting policy. But those most directly affected never know what the critical criteria are.

Except for data involved that is personal or embarrassing to an individual, much of the data concerning personnel actions ought to be made available for all to see, so that each may know where he stands. Every five or seven years, say, the Army ought to open its books to each individual officer—not just the 201 file, but also the assessments that never get into a 201 file. In effect, the Army would say, "Here are your strengths and weaknesses, as far as we are concerned. Here is your standing on every measuring device we use. It is all here; we have held nothing back."

Still another aspect of secrecy is a broad one: *the lack of information about the policies to be followed in the years ahead*, even next year, and including war-time policies. Undeniably, basic issues whose solution is still unpredictable in the national arena will affect the future course of several Army personnel policies. Nevertheless, alternative intentions, or at least many alternative contingencies, and the WHY's or WHY NOT's, can be discussed for the edification of those affected. There is room for considerable improvement in the Army's informing its own

people, in advance, of personnel policies under consideration. In turn, a better-informed Army would make it possible to exploit the great unused reservoir of valuable opinion in the Army, which, if asked or permitted to contribute its ideas, would improve the result in a large proportion of the problems.

Fear of numbers.—Statisticians like tidy numbers. If an experience factor says it is an optimum situation to have, say, 500 people eligible if one intends to choose, say 250, the statistician likes to restrict the examination to 500, no matter how many are waiting. But the number of people who enter the Army each year increases and diminishes as crisis intensifies or relaxes. From World War II, thousands of contemporaries now come along where only hundreds might come along in an ordinary year. This dismays the statistician or the orderly minded. "There are too many!" he says.

Yet here they are, each one alive and kicking, each one entitled to the same consideration as his contemporaries. Some of the solutions that have been used so far are difficult to admire. No convincing case can be made for insisting on exhausting one year's contingent, perhaps over a five-year period, before considering the next year's contingent. No one should wait any longer to be looked at than any other contemporary. If contemporaries come along by the thousands, look at them all and pick the best. And if next year's contemporaries come along by twice as many thousands, look at all of them and pick the best. If to do so will require a large board eight months to finish, so what? To take any other course is to deprive the Army of a proportion of the best men of every vintage.

Responsible and straight reporting.—As though affected by the ubiquitous Madison Avenue influence, even our personnel policies are sometimes announced and explained with an optimistic, "you-lucky-

people" approach that is not always borne out by further study of the policy. For example, the Medicare Bill was reported to the rank and file of the services in a strange sequence. At first, one could find out practically nothing about it. Then gradually a succession of praises were released, concentrating on the good fortune of service people in becoming beneficiaries of several positive provisions of the bill. Negative features, such as the reduction in the authorized ratio of medical men and the lack of outpatient care and dental care, were not discussed, and, in fact, were not even released until much later.

Another instance of sugar-coating was the characterization of a 1956 provision for promotion of five percent of one year's promotions to colonel from officers outside the basic zone as an opportunity for "outstanding officers to be promoted ahead of their contemporaries." In reality, what the provision offered for many of the small number of outstanding officers selected was primarily an opportunity to *catch up* with many contemporaries.

Austerity in personnel matters.—No military man objects to the concept of "austerity" applied to things or to field training. But all taxpayers, military and civilian, should vigorously resist any application of "austerity" to the living conditions of military families. It is a mistake, morale-wise, for the services to gain savings, for example, by failing to rehabilitate deteriorating quarters or by cutting corners on travel conditions.

The services are continually adjured to maintain "austerity," as though austere living conditions would attract anyone worth having today. Remember the Army's being asked, "Why are you planning to put tile in barracks washrooms? Isn't rough cement good enough?" Why should anyone expect any other reaction than for a soldier to ask "Have you rough cement in *your* bathroom? Is rough cement good enough for you?" Every time soldiers

read about such a question, I suppose a number of good men in the Armed Forces around the world have their minds made up for them. "That's it," they say, "That's the last straw. Rough cement!"

The key to the handling of men is to find the *wellsprings of volition*. We have always known this, and have always sought them, but only haphazardly, intermittently—and, anyway, only the enlightened sought them at all. Now there is no room for other than enlightened people in the personnel-handling business, a group which includes all the officers and noncommissioned officers in the Army. More than ever, and without fail, we must find the policies that make men *want* to do what is required, that makes the best men want to continue in the Army for the national good.

Military men do not question the basic soldierly virtue of obedience in operations, logistics, intelligence, training, or in moving out to the hottest sector of the war. Nor do they question it in personnel matters. The great majority of American soldiers of all ranks, private to general, do not seek advantage over others that is not honestly earned. They unanimously seek a square deal. But they are increasingly competent to judge for themselves whether or not a deal is square.

Conclusions

Nostalgia for the old days is all right. As the poet said, we all look back longingly on our first, sweet, simple loves. But, as Thomas Wolfe offered in rebuttal, you can't go home again. The price for living in a stimulating period is that a period of stimulation is also likely to be a period of transition, and transition is always partly painful. The clock cannot be turned back, nor can it be slowed down. Based on continuing valid principles, the Army must adapt its practices, not only to "official" forces, but also to the evolving ideals, standards, and desires of its people. That the Army is well-aware of this neces-

sity is established by its research into many areas and its adoption of many advanced methods.

Like every great institution, the Army's future success will depend in large part upon the accuracy and adaptability of its analysis of the evolving society in which we live and which we are dedicated to protect. Its success will depend upon its acumen in reading accurately not only the physical forces in the age of technology but also the social forces. It is particularly for the Army, the service in which the machine is subservient to the man, to set the pace in advanced and equitable procedures for handling "manpower" and "personnel" in terms of "man" and "person."

Despite all the pressures working on it from several directions at once, the Army shows no signs of being incapable of making the adjustments necessary to keep it abreast of the times. Despite the constant threat of strength cuts, despite indifference and widespread misunderstanding of the nature of future war, the Army proceeds true to its basic characteristics of self-sacrificing devotion to the Nation,

absolute integrity, modesty, breadth and depth of vision, unparalleled experience, and matchless achievement. This is still THE GREAT ARMY to which we belong—first to pioneer and tame the wilderness, first in the air, first in space.

Its record in nonmartial achievements—engineering, medicine, education, government, and a hundred other fields—is exceeded only by its military exploits in 145 campaigns, around the world, for almost 200 years; it never brought the United States in second. Like the first of its many great commanders in chief, the Army is truly first in war and first in peace. Despite all the conflicting advance publicity, discussion, and prediction, the first satellite of the Western World was hoisted into orbit by none other than the modest team of powerful accomplishment, the same tried, trusty, and ready Army it has always been and will always be.

As *Explorer* carries the pioneer colors of the Army in space, it is hoped that the observations made herein may contribute to orienting the Army's personnel policy trajectory in the future—a future of which more is "unknown" than ever before.

The picture of the modern Army would not be complete if I failed to touch on the improvements which have been made with respect to the Army's most valuable asset: its men and women. In recent years, the Army has been able to take several steps to improve the conditions of service. New programs have been placed in effect to aid in the development and recognition of our noncommissioned officers, critical specialists, and officers. Continuing efforts are being made to provide wide educational opportunities; to improve stability in duty tours; to provide adequate family housing; and a host of other actions.

General George H. Decker

THE
being
sovere
past
every
sourc
ons,
ganiz
Aust
achie
Th
ginni
execu
lished
postv
der a
arme
In
up th
milit
army
cruit
the a
of th
Ni
Hung
anny
with
tions
Nobo
woul
offic
rollin

The
five
mili

ch and
rience,
is still
belong
erness,

ements
a, gov-
lds—is
toits in

for al-
ht the
first of
ief, the
first in
advance
on, the
ld was
than the
shment,
y Army

ys be.
r colors
that the
tribute
l policy
of which
fore.

to
y's
een
ams
our
orts
sta-
her

THE AUSTRIAN FEDERAL ARMY

An Appraisal

Walter Hamburger

THE Austrian Federal Army came into being in 1955 when Austria recovered her sovereignty and independence. During the past five years the army has grown in every way. Today, 50,000 strong, its sources of power include modern weapons, superior transportation, flexible organization, and a high sense of purpose. Austrians are understandably proud of its achievements.

The present-day army traces its beginnings to the Bundes-Gendarmerie. The executive branch of the government established this 6,500-man force during the postwar period to maintain law and order and to serve as a cadre for any future armed forces.

In October 1956 the government called up the first half of the recruits due for military service. This step increased the army's strength to 22,500 men. The recruits trained with arms left behind by the allied troops and placed at the disposal of the army.

Nine days after this first callup the Hungarians revolted against Soviet tyranny. The Austrian Government forthwith ordered the army to take up positions to protect the Austrian border. Nobody had expected that the young army would be put to test so soon. An armor officer reported the hazards involved in rolling heavy tanks into prepared posi-

tions by young drivers who had not yet finished their training.

A Swiss paper wrote:

So smoothly did the Austrian troops take up their positions that one might have thought they were acting according to a marching plan prepared a long time previously and very well-trained.

Military Organization

Today, the army consists of 88 infantry companies, 29 artillery batteries, 10 reconnaissance companies, 10 armored companies, 11 antitank companies, five armored infantry companies, 18 engineer units, 10 signal units, 17 supply units, nine medical companies, 13 aviation units, six anti-aircraft units, and three air signal units.

These are formed into three groups consisting of four infantry brigades, four mountain infantry brigades, and one armored brigade. In addition, there are the support and staff troops and the air forces. A brigade is made up of 3,000 to 5,000 men and consists of four independent battalions.

Each brigade, in addition to its basic infantry or armor units, contains the following units: a reconnaissance company, an antitank company, a signal company, an engineer company, an artillery detachment, a medical company, an anti-aircraft

The Austrian Federal Army has progressed rapidly since its activation five years ago. The new army is on its way to becoming a powerful military force which any aggressor would be ill-advised to challenge

platoon, and a supply company. Experience already has shown that one engineer company for each brigade is insufficient. Therefore, reorganization into engineer battalions has taken place in two brigades.

Each branch of the service has its own training center. In these centers noncommissioned officers receive special training. New arms as well as methods of combat also are tested.

The system of establishing small independent formations, the largest unit of which is equivalent to the brigade, was smiled at by many of the experts during 1956. However, this type of organization has proved itself. A number of larger states, and especially the German Federal Republic, have introduced a similar system.

The advantage of the brigades is in their flexibility which permits the formation of small combat units able to operate independently. This is of particular importance in view of the demands of the nuclear age. At the moment, one of the infantry brigades (the 3d) is converting to an armored infantry brigade.

Army Supply

A guiding principle in supplying and arming the Federal Army is to develop and manufacture as many articles as possible within Austria. For example, the infantry's basic weapon is the FN-assault gun which is manufactured on license at the Steyr works. By the end of the year, 50,000 guns will be delivered. An antitank grenade as well as an excellent plastic hand grenade suited to fit these guns also are being produced in Austria. Until the end of 1958 the entire army was supplied with uniforms made in Austria.

The dyes used in the new camouflaged

Walter Hamburger, a native of Austria, has a degree in Electrical Engineering. A student of military history, he is Vienna military correspondent for the Swiss newspaper Der Schweizer Soldat and for the Canadian Military Journal.

clothing possess a varied infrared absorptive quality similar to that found in nature. This implies that camouflage is maintained even under surveillance by infrared sighting instruments. Tents also are manufactured with the same kind of fabric.

Large cargo trucks gradually are being replaced by Austrian *Steyr* and *Saurer* trucks and quarter-ton trucks by *Puch-Haflingers* (a small jeeplike four-wheel drive vehicle produced and developed by the Austrian *Puch* factories). They are named after the famous breed of Austrian mountain horses *Haflinger*. A thousand units are presently on order.

Some regard the *Puch-Haflinger* as the realization of a military man's dreams. It is inexpensive in cost as well as in operation. Its performance even in the roughest terrain is excellent. Relatively small size enables it to get through where other cross-country vehicles have trouble. Its total weight is 1,000 kilograms (own weight 580 kilograms, loading capacity 400 kilograms). Lightness and durability make it ideal for parachute operations.

Not only have the most modern techniques been used in its construction, but also the most expensive materials. Its shaft is hardened and all bearings are made of ternary alloy lead bronze sliding journal material. An oil condenser prevents overheating of the motor even in tropical climate. The motor develops 22 horsepower and is fitted with a regulator permitting a maximum of 4,500 revolutions per minute. This prevents any overspeeding of the engine in cross-country stretches. The vehicle is capable of speeds up to about 60 kilometers per hour. *Puch-Haflinger* can negotiate 65 percent inclines.

The armored infantry will receive new Austrian *Saurer* armored personnel carriers fitted with diesel motors. This armored personnel carrier has a weight of 12.2 tons, and with its 250-horsepower motor is able to attain a speed of 65

absorption in narrow slopes. The armored forces are equipped mainly with American M47 tanks. Eventually, all units will have them. The M41's are replacing the M24's in the armored reconnaissance unit. Self-propelled artillery and anti-aircraft tanks soon will be available for the tank brigade. Each of the infantry brigades will have one armored

radar-controlled 4-centimeter *Bofors* and 2-centimeter *Oerlikon* anti-aircraft guns have been acquired.

The air force could not be activated and equipped as rapidly as the land force. Pilot training is under way but aircraft will not be procured until some later date. A number of helicopters, equally useful in case of natural catastrophe or for defense, already are at hand. An over-all



Puch-Haflinger vehicles of a light reconnaissance company

company and one armored infantry company attached. At the present time, the army has 500 tanks.

Light 10.5-centimeter field howitzers, heavy 15.5-centimeter field howitzers, and heavy 15.5-centimeter field guns constitute the major arms of the Austrian artillery; 12-centimeter mortars of 5.6 kilometers firing range are to be produced in Austria. A battery of rocket launchers was purchased from Czechoslovakia. Each of the four projectors has 32 barrels of 13-centimeter caliber and a firing range of 8 kilometers. For anti-aircraft defense,

radar system will be built during the current year.

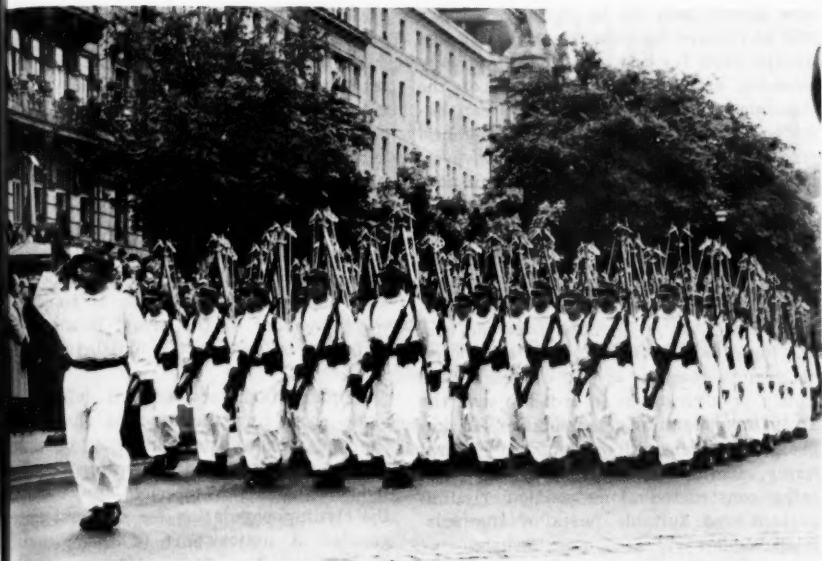
Mobilization Base

The organizational base of the Austrian Federal Army is that of an enlisted cadre army. In case of mobilization, draftees will fill out standing units, and additional new divisions will be created. In view of her trained reserves and the available stock of arms, Austria is in a position today to mobilize and equip a 100,000-man army, if required. A mobilization standard of 300,000 men is envisaged as a possibility. Obligated peacetime service which



Above, the colors company of the Military Academy. Below left, a rocket projector battery of Czechoslovakian make. Below right, an Austrian soldier in battle dress with an FN-assault gun





Mountain infantry with skis



Saurer armored personnel carriers

now affects men up to 50 years of age will be reduced because the remaining age groups liable for callup will suffice for any intended mobilization. Expansion of the standing army will emphasize its capability to fulfill its tasks as a training and enlisted cadre force. This plan, however, is handicapped seriously by a lack of non-commissioned officers.

Planning for future expansion includes the establishment of armed borderline forces. The cooperation of the customs control authorities has been sought in this respect. It is intended that the border forces will be able to halt any possible enemy attack or to seal off small-scale enemy breakthroughs in order to give the army an opportunity to mobilize. To improve the defensive power of the Federal Army, small fortified defense systems are being constructed along particularly important and suitable parts of the Austrian border.

Civil Defense

Along with purely military expansion, measures for establishment of an Austrian civil defense are under way. For many reasons, including training, civilian and military radiation defense measures must be coordinated. Similarly, equipment should be standardized for civil and military forces, if possible.

All Austrian recruits without exception learn basic protective measures against radiation. Many specialists in the field of radiation protection in the Federal Army subsequently will take their skills back into civilian life.

Radiation security laboratories already exist in Vienna, Linz, and Innsbruck and soon will be operating in Klagenfurt and Graz. Eventually, all federal capitals will have them. These laboratories keep a constant watch on the radioactivity in the air as well as the waterways and lakes. They also will be able to test the amount of radioactivity present in food-

stuffs and harvested products. By the end of the year Austria will have in operation three mobile radiation security test laboratories for use in areas where catastrophes may occur. The three group commands of the Austrian Federal Army in Vienna, Graz, and Salzburg also will have motorized-radiation security test laboratories for field use.

For individual protection, an identification tag already is in use by the Federal Army. This is the IDOS (Identification Tag Dosimeter) tag which is issued to every member of the army. It measures radiation by means of a film layer on its surface.

Primary tasks of the civil defense include rebuilding the air-raid shelters of the last war, constructing new ones, organizing a system of warnings, storing food and first aid materials, and training the civilian population for national emergencies. A major part of the planning already has been done and now only the relevant laws are required.

The attitude of the population toward the army is largely positive. Army assistance during natural disaster has contributed largely to this feeling. Young people entering the service take this very seriously and are less opposed to military duty than was expected after the postwar period in which the military was in low esteem. There are few conscientious objectors in Austria. Nevertheless, there are still many obstacles to be overcome, mainly in the sphere of ideology of national defense. The Ministry of Defense is trying to close these ideological gaps by means of a series of booklets entitled *Landesverteidigung notwendig, Landesverteidigung möglich* (National Defense Required, National Defense Possible). The pamphlets advance the thesis that a state as exposed as Austria requires a strong national defense and that a successful defense is possible for small states, as history has proved.

Strategic Mobility Is a National State of Mind

George Fielding Eliot

The Committee considers mobility a matter of the greatest importance.

The Committee on Appropriations, House of Representatives, on the Department of Defense Appropriation Bill

RECENT writers in the *Military Review* have stressed the point that the concept of mobility originates in the human mind—by implication, finding its root source in the human spirit.

In the February 1960 issue, for example, Captain Clinton E. Granger, Jr., writes:

Mobile warfare is a concept in the mind of a commander. It is a way of thinking concerning the manner of conduct of tactical operations . . . it is also the spirit of aggressiveness applied to tactics—both in planning and execution . . . at all levels of command.

In the issue of May 1960, Lieutenant Colonel Daniel A. Raymond observes:

A good case can be made that mobility is a state of mind that depends primarily on the will for achievement . . . mobility is achieved through purpose.

The popular refrain, "Don't fence me in," typifies the historic American attitude toward foreign and military policy. Nothing less than continental dominion,

ocean to ocean, with no dangerous enemies remaining on our frontiers, would satisfy successive American generations during the first century of our history as an independent people. We did not shrink from the use or threat of force in support of these aspirations.

Even Thomas Jefferson—surely among the most pacific-minded of Presidents—was secretly determined to launch what would today be called "armed aggression" against Louisiana had his free-wheeling diplomacy failed to prevent that region from becoming a foothold for Napoleonic totalitarianism. Jefferson and other political leaders frequently warned against "entangling alliances," yet for three-quarters of the 19th century the core of our foreign policy was the Monroe Doctrine, the military cornerstone of which was a tacit alliance with Great Britain.

In the 20th century we have been more reluctant to enter upon armed conflict. We have taken great risks to avoid doing so. But once war has come upon us, we

A basic policy which favors offensive action and mobility as opposed to static defense is needed. The American people want to be assured that their safety is based on the freedom of action of mobile forces

have heeded the famous advice of Polonius to his son:

. . . Beware
Of entrance to a quarrel, but,
being in,
Bear't that the opposed may
beware of thee.

The military principles to which we have sought to give expression are those of offensive action and mobility. A static defensive has been abhorrent to us, inconsistent with the restless energy which has been so outstanding a trait of our national character. When adopted through force of circumstances or command decision, it usually has ended in disaster. We have relied on mobility, by land and sea and in later times by air, to carry the war to the territory of our foes. We have sought to fight, if fight we must, on foreign soil. The security of our continental base and its resources has been sought through offensive operations intended to deny the enemy any opportunity of attacking us at home. Thus we have habitually sought freedom of action for ourselves with its essential corollary of limiting the freedom of action of the enemy.

It is not suggested that in all our wars we have pursued a consistent, prepared strategic plan based on these principles. We have more often followed them as a matter of national instinct. Whenever and wherever we have departed from them, the psychological result has been widespread public criticism, loss of confidence,

George Fielding Eliot, a military columnist with General Features Syndicate, is the author of a number of books, including Sylvanus Thayer of West Point. Although born in the United States, he received most of his education in Australia. He served with the Australian Imperial Force in the Dardanelles and on the Western Front during 1914-18, and was a member of the US Army during 1922-30. His most recent article for the MILITARY REVIEW, "Toward a New Birth of Confidence," appeared in the October 1959 issue.

apathy, and even outright opposition to continuing the war.

This experience suggests that there is an American concept of war, of strategy, of defense policy from which the national political leadership departs at its peril—and the peril of the country. No people can face a powerful enemy confidently, in cold war or hot, with weapons and methods which they instinctively distrust.

First Lessons

The American Revolution provided our first lessons in national strategy, under the inspired guidance of General George Washington. In this war the outstanding American tactical advantage was the superior mobility of our fighting forces in the American countryside over the rigidly trained British Regulars. Washington, who had first-hand experience of the inability of European-trained troops to cope with, or employ, the open-order tactics suited to American terrain, made this tactical superiority of his troops the basis of his strategy.

The British could land troops from the sea, or move them from point to point along the coast, as long as the Royal Navy could control the coastal waters. But any attempt to penetrate the interior brought increasing difficulties with every mile that a British force moved away from its seaborne supplies. The military history of the Revolution is one long account of sealand British forces trying to come to grips with American armies only to find their supplies cut off, their detachments overwhelmed, and to face at last complete disaster (as with Burgoyne at Saratoga) or to be chased back to the coast and confined in a seaport.

During the earlier years of the war, Washington compensated for inferior numbers and scanty equipment by incessant movement. Above all, he avoided being shut up in any fixed position. Although he had to abandon first New York and later Philadelphia to enemy occupa-

tion,
with
ment,
lowed
assum
He u
the A
nor o
camp
even
"We
skeer
The
cludin
told B
as imp
had n
Germa
army
the no
The
the A
the lo
army
to th
Washi
into th
lost n
subseq
Caroli
campa
wallis
afford
Lincol
ington
It is
fruit v
from
the Fr
establi
a port
tended
of the
(Clint
the so
source
before

tion, he kept his army mobile, in touch with its sources of supply and recruitment, and as intact as circumstances allowed. He neglected no opportunity of assuming the offensive on a limited scale. He understood well how inspiring, to the American temperament, could be minor offensive successes such as the winter campaign of Trenton and Princeton, or even the drawn fight at Germantown—"We attacked 'em, didn't we? We ain't skeered of them lobster-backs!"

The French minister Vergennes, in concluding the Franco-American alliance, told Benjamin Franklin that he was quite as impressed by the fact that Washington had not hesitated to take the offensive at Germantown against Howe's superior army as by the surrender of Burgoyne in the northern wilderness.

The worst single disaster suffered by the American forces during the war was the loss of General Benjamin Lincoln's army at Charleston in 1780. This was due to the fact that Lincoln had—against Washington's advice—thrown his troops into the city to defend it, and as a result lost not merely a city but his army. The subsequent partisan operations in the Carolinas, together with Greene's masterly campaign of movement which drove Cornwallis to his eventual doom at Yorktown, afford eloquent comment on the folly of Lincoln's course and the wisdom of Washington's counsel.

Supply by Sea

It is characteristic that the strategic fruit which Washington sought to garner from the French alliance was to induce the French to use their powerful fleet to establish temporary superiority at sea on a portion of the American coast. The intended result was that one or the other of the two British armies in America (Clinton in New York and Cornwallis in the south) might be denied the chief resource upon which the British had theretofore been able confidently to rely—mo-

bility and uninterrupted supply by sea.

From the moment De Grasse's ships of the line appeared in Chesapeake Bay in the fall of 1781, Cornwallis lost all freedom of action while Clinton had no means of interfering with Washington's freedom to concentrate by land—making maximum use of the mobility conferred by the inland waterways—against Cornwallis' trapped army.

Not the least of the advantages produced by Washington's mobile strategy—"mobility achieved through purpose"—was its effect on the minds of the opposing commanders and, at second hand, of the British ministry and people. Thus Sir William Howe, outnumbering Washington several times over, lay idle in New York for the first six months of 1777 with the strongest army Britain was ever to assemble in America in the entire course of the war. He neither made any serious attempt to destroy Washington's army, nor could he bring himself to march up the Hudson to join hands with Burgoyne.

Experience—reaching all the way back to the affair of Lexington and Concord in 1775—had fixed in Howe's mind the belief that the countryside was swarming with armed Yankees eagerly waiting for the redcoats to appear. He was deterred from effective action *because he believed himself to be deterred*. When he did move, he moved *by sea* against Philadelphia—abandoning "Gentleman Johnny" Burgoyne to his fate.

Cornwallis, an abler commander, had a similar experience against Greene in the Carolinas. His surrender at Yorktown put the psychological capstone on the edifice of British weariness with this fluid, intangible warfare in America, in which every victory turned to ashes in a few weeks while fresh enemy armies seemed to spring from the very ground.

The heritage of reliance on mobility and offensive action which Washington's leadership bequeathed to the Nation affected the conduct of all our subsequent wars,

and has helped to shape our national strategy and military policy. It is true that these lessons were not immediately and universally applied. We shrank from creating an adequate Regular Army. We refused to spend the money to build up the trained militia system which Washington recommended. We sought naval security in flotillas of coast defense gunboats instead of the modest establishment of sea-going battleships. But we retained a belief in offensive warfare, of which mobility is the indispensable handmaiden, and our deep-rooted instinct for freedom of action as the foundation of national security.

Underlying the tangle of conflicting interests and confused motives which resulted in the War of 1812 was the conviction, widely held in the Western States, that we could not count ourselves secure either against Indian outrages on the frontier or possible invasion unless we took advantage of Britain's embroilment with Napoleon to expel the British from Canada. When the war began, invasion of Canada was our earliest purpose; that it did not succeed was due to incapability, superannuated commanders plus failure to build up adequate military forces in the prewar years: the strategic instinct was sound.

The Navy—with an experienced officer corps—gave us command of Lakes Erie and Champlain, limiting British freedom of action by denying their forces strategic and logistic mobility. Macdonough's victory on Lake Champlain in 1814 was indeed the decisive operation of the war, since it paralyzed the threat of invasion from the north and influenced the British Government toward making a reasonable peace.

That the Nation was advancing toward maturity is indicated by at least partial acceptance of the lessons of this war, in which we had so narrowly escaped disaster. The Army was maintained at a higher average strength. The postwar

commands were given to officers who had distinguished themselves in the field, headed by Jacob Brown and Andrew Jackson; never again were we to be without a sea-going Navy. Colonel Sylvanus Thayer was encouraged and supported in his great work of lifting the Military Academy out of the doldrums of neglect and transforming it into a reliable source of trained military leadership.

Expansion and Consolidation

But our great national purpose after 1815 was continental expansion and consolidation. This was a task to absorb all our energies. The foreign and military policies we required, as far as Europe was concerned, had as their central theme the safeguarding of our freedom of action on this continent against threat or interference from across the seas. In this need lay the germ of the Monroe Doctrine, secured by the interest common to the British and ourselves of preventing further intrusions by the authoritarian states of continental Europe into Latin America.

The British interest in this purpose was chiefly economic, ours was chiefly strategic. The British wanted to keep Latin America outside the restrictive trade policies of their European neighbors; we wanted to turn our attention to the conquest of a continent untrammelled by powerful and predatory neighbors or indeed by the expense of building a Navy capable of dealing with European threats. While the British Fleet controlled the Atlantic, we were relieved of the latter necessity.

The strategic essence of the Monroe Doctrine was to prevent the accumulation of potentially hostile power within striking distance of our home territory. So considered, it was basically a safeguard against surprise attack—that is, an attack launched by a superior force which might strike us before we could prepare to deal with it. It was a tacit recognition of the slowness of our reaction time, in

which distance was a major factor. It was a compromise with domestic political conditions which made it impossible for us to build up adequate military forces to guarantee our freedom of action against foreign interference.

Thus protected, we turned our energies westward. We fought a war of national expansion against Mexico in 1846-47, in which the sterling quality of Thayer's work at West Point was tested and proved. It was a war of mobility and offensive action from the outset. When Taylor's army in northern Mexico had reached the limits of its logistic tether, we moved by sea to Veracruz and launched Scott's army against the Mexican capital. Kearny's overland march to California, where he was supported by the Navy's Pacific squadron, was a daring and highly successful application of mobility by land and sea to achieve a strategic purpose. The precepts of our national strategy were taking form.

The War Between the States, fought by Americans on both sides, further developed these precepts. From start to finish it was a war of movement, with maximum use of the new element of steam transportation by water and rail. Few commanders on either side showed much tendency to rely on fixed positions or a static defensive; those who did suffered accordingly, the outstanding example being Pemberton at Vicksburg. The loss by Albert Sidney Johnston of a substantial portion of his army to Grant and Foote at Fort Donelson was an earlier example of the folly of expecting fixed positions to contain amphibious mobility—and, incidentally, again exemplified how a successful local offensive can lift the spirits of Americans in the midst of a winter of general discontent.

The impatient cry of "On to Richmond" the North may have been premature, but it was consistent with the American spirit. The Confederate strategy, although defensive in political purpose, was gen-

erally implemented by a most active defense in the field. Much of Lee's success in Virginia was, like Washington's, due to the effect produced on the minds of his opponents by mobility and maneuver. Defeat came to him in the end when his local freedom of action was curtailed by the withering of the resources which sustained it—through the exploitation of strategic mobility in the west and south by Grant and Sherman, and by the Union Navy along the coasts.

It was only in the last extremity that Lee, after three years of sustaining an active offensive-defensive against constantly superior forces, finally went to earth in semipermanent fortifications at Petersburg—with a heart heavy with foreboding as to the consequences. "I can no longer attack," he wrote to President Davis.

One of the outstanding command decisions of the war was surely Sherman's abandonment of his rail-supplied base at Chattanooga for a sea-supplied base on the coast, from which he might strike northward through the Carolinas against Lee's rear. This was not only an example par excellence of the principle of mobility, but of its application to what Colonel Raymond calls its "pay-off category . . . to disrupt and then deny continuity of the enemy rear as a means to accomplish the rapid destruction and defeat of the enemy forces."

New Responsibility

A period of military lethargy, as might have been expected, followed the end of the great Civil War. But a change was coming—a change which was to compel the United States to assume the quality, and the burdens, of a great power. The outward and visible portent of this new responsibility came with the Spanish-American War of 1898.

By this time we had renovated our Navy to some extent. True to our instincts, we promptly took the offensive, contained and

destroyed the only effective Spanish naval force and thus ensured our complete freedom of action in the West Indies. Nor did we hesitate to reach across the wide Pacific and expel Spain from the Philippine Islands, incidentally securing intermediate island positions in Hawaii and Guam which during World War II became the steppingstones of our strategic mobility in the Pacific area.

New Threats

As we digested,—with much political squabbling—the immediate consequences of these events, we began to realize that even more drastic changes were on the horizon. Our continental expansion had been completed, the threat of internal division averted without serious outside interference under the tacit protection of the worldwide economic and political order of which British seapower had been the balancing element.

Now the military pivot of that order began to be threatened. The rise of the German Navy menaced British dominance in the Atlantic. In the Pacific a new seapower, Japan, appeared, far outside the limits of British maritime control. To this change, we found the only possible answer—a Navy of our own capable of commanding our sea approaches, and an interoceanic canal to enable the fleet to be concentrated in either ocean as necessary.

It became politically possible for America to build a great fleet and to implement the century-old, never-fulfilled plans for a canal at Panama simply because both these measures were consistent with the national instinct for preserving our freedom of action—and for doing so with mobile forces capable of offensive operations. Thus the foresight of Theodore Roosevelt and the strategic genius of Mahan were given practical expression.

There was, of course, much talk of "defense," and much of the political theory of neutrality in foreign quarrels which was inherent in the Monroe Doctrine. Behind

all the tangled verbiage which accompanied our entry into World War I, the grim fact stood starkly apparent that without American aid the German U-boats might dominate the Atlantic sealanes.

Once again we took the offensive by sea and land with all the force we could muster. America could, as President Wilson said in quite another context, "do no other." We used conscription to raise a sufficient Army, and we had a warning for the future in the fact that well over a year elapsed between the declaration of war and the first effective combat use of American troops in France. This warning we tried stoutly to forget when the war was over. We even went through a period in which we tried to create a new political climate for the world out of paper agreements, and rehashed—nostalgically—the blessings of neutrality.

Yet when war came again, we followed our instincts as before. Staggering under the blow to our battle fleet at Pearl Harbor, we took the offensive in the Pacific only eight months later and continued it until the Japanese empire lay in ruins. We landed troops in North Africa in 1942 chiefly because President Franklin D. Roosevelt—who understood the hidden springs of the American spirit as few Presidents have—was convinced that it was psychologically necessary for American troops to be actively engaged against the Germans before the end of that year. It was one of the few occasions when the President overrode the united opinion of his chief military advisors. Like Washington before him, and Lincoln too, he realized that visible offensive successes even though not decisive, were an essential element of American morale in war.

Mobility in World War II

This is hardly the place to review the well-known military history of World War II, save to remark that from these early beginnings American mobile power was used offensively to carry the war to

our overseas enemies both in the East and the West: one of the few instances in which any nation has found the resources to sustain two victorious major offensive campaigns simultaneously.

In both campaigns, the use of airpower—land-based and sea-based—was extensive. The Doolittle raid on Tokyo, and our persistence in clinging to daylight bombing over Germany, were both instances of the American determination to do damage to the enemy even at heavy cost. The most severe setback of the war came at its outset—at Pearl Harbor—and it resulted from having a stationary target in a known location where hostile airpower could get at it and destroy it.

Throughout this long war, our choice of weapons was concerned, above all, with the qualities of offensive action and mobility. There were criticisms of our tanks as being inferior in armor and gunpower to some of the larger German models. The answer was that they were more mobile—strategically, because they could be embarked and disembarked with the available handling gear; tactically, because they were light enough to maneuver on European terrain. We preferred mobile offensive mass to individual steel forts. "The happy hunting ground for armor," said General George S. Patton, "is in the enemy's rear. Use every means to get it there."

We built attack aircraft carriers to take planes to sea for offensive purposes, and escort carriers to take them to sea to defend convoys against German U-boats. We sought logistic mobility by all available means; and we sought by all available means to deny logistic mobility to the enemy whether with submarines in the Western Pacific, or with aircraft in the preparation for the Normandy landing.

There is the record—from 1775 onward. It is not a perfect record. We have not always done those things we ought to have done, or left undone those things we ought not to have done, but we have won almost

all the wars we have fought, and we have won them by the offensive application of mobile power. The fighting instincts of our people have emerged from this experience—revealed, defined, and developed. Wise leadership usually has sought to direct our strategy, our military policy, along lines consistent with those instincts, by methods commanding that public confidence without which no war can be won and no position of readiness fully supported by a free society.

The nearest we came to defeat was in the War of 1812. In that war a very large proportion of the people lost confidence in its conduct because we assumed a defensive posture which we had little prospect indeed of ever transforming into the offensive. We had lost our freedom of action. We escaped the worst because the enemy was too tired of war after 22 years of fighting the French to waste more effort and casualties on us.

Conduct of Cold War

These considerations can well be applied to the conduct of the cold war in which we are now engaged. Today, we are confused, unhappy, and distrustful. On every hand we find questioning of our own purposes and the methods by which those purposes are implemented. We were shocked by the Soviet *Sputnik*, out of all proportion to its true military qualities, because it came as the climax of a series of events in which the Soviets had proved that they could produce both nuclear weapons and long-range delivery systems in which we had fondly imagined we had an enduring monopoly.

We talk of the "crushing" superiority of Soviet land forces, without ever stopping to ask ourselves why the Soviets should be able to maintain such a superiority in Europe, or whether they could—at any point around the Soviet perimeter—concentrate and maintain in action more than a fraction, large or small, of the 175 first-line divisions with which

they are credited. We are likewise hypnotized by the figure of 450 Soviet submarines, and imagine them all cruising in the Atlantic Ocean, attacking our shipping and even bombarding our coasts, without asking how or from what ports they got there in such numbers, how they are maintained, and what our antisubmarine warfare forces are going to be doing in the meanwhile.

We are, in fact, facing the need to devise new methods to implement our age-old strategy of freedom of action, and the confusion in our minds arises from uncertainty as to the choice of means—compounded by anxiety at the fact that for the first time since 1814, our home territory can be directly assaulted by a foreign enemy, with the possibility of surprise.

Since our whole instinctive insistence on freedom of action has had as its very foundation the security of our continental base against surprise attack, this new possibility is most disturbing—and it is the one consideration most likely to throw us off balance.

We shudder at doleful "descriptions" of what might happen if the Soviets were to loose X number of megatons of explosive violence against the United States. We seek comfort in aimless discussion of agreements, disarmament, stopping nuclear tests, and other escape mechanisms—into the meshes of which commonsense should tell us the Soviets are not going to be drawn unless they can obtain thereby definite military advantage for themselves.

Fixed-Site Armament

One reason we try to comfort ourselves with such phantom hopes can surely be ascribed to instinctive distrust of the hasty steps we have taken to provide ourselves with weapons developed by the Soviets for Soviet purposes but quite unsuited to any rational American strategic purpose or indeed to the American national character. Under the new threat of

nuclear surprise attack, we have rushed to provide ourselves with fixed-site armament which offers us no prospect of escaping from the clutches of defensive inactivity.

The enemy is constructing huge missiles to deliver nuclear warheads over the thousands of miles which separate targets in North America from his launching sites. He is doing this because he has no other dependable method of attacking American targets, and, therefore, no other method of maintaining direct pressure upon us by way of blackmail. We rush to copy his methods and his weapons; we talk of a missile gap, or a deterrent gap. We indulge in obscene orgies of what has come to be called "missile mathematics"—so many megatons to destroy one missile site hardened to 25 pounds per square inch, so many if the hardening can resist pressures of 100 pounds per square inch. We calculate whether we could react effectively within limits of 15 minutes' or 30 minutes' warning time—and perhaps whether the stations of the early warning system might not be attacked first of all.

We wonder whether the President of the United States—at some future time—could be reached, and convinced that the hostile missiles were on the way, in season to launch retaliation; whether the Soviets will believe that he could; and what good it would do us to wipe out the Soviet Union X seconds before or after we were wiped out. Those of us who are handy with paper and pencil, and have read the latest data about radioactive fallout can even figure out how many people are likely to be alive and uncrippled in the Northern Hemisphere six weeks after such a nuclear exchange has taken place between the Soviet Union and America.

Of all these ingredients of our current discontent, certainly the worst—from the point of view of public confidence—is the studding of our homeland with giant fixed missile bases which are certain to be the primary concern of the hostile target se-

lectors. This amounts to nothing less than the entombing of American mobility in concrete and steel. We are building Fortress America. What this comes to in the end is a massive transatlantic confrontation between two missile-armed fortress systems, with all the advantage of initiative abandoned to the enemy (unless in despair we should decide to strike first). What is worse, we can be pressured by missile mathematics into building more and more of these concrete forts until the effort to keep the "missile gap" closed absorbs all our military resources, leaving us totally immobilized, like—to use another Patton expression—"a duck in a bathtub."

Soviet Dilemma

We shall then, to boil it down, have placed our military program at the mercy of Soviet decision. They have only to build more missiles, and we must follow suit—once we have become irrevocably committed to position warfare.

The remedy is to break out of this concrete trap while we still have time, before too heavy a proportion of our industrial output and our economy is immobilized in these giant weapons systems, thus also immobilizing our ability to react effectively to hostile initiatives. Before the time comes when we shall have no other response to challenge than to submit, or to launch the nuclear holocaust—before we have no other means of deterring or defeating enemy ventures than one which is known to involve the survival of the American nation—we must break away and seek, as we always have, our safety in mobility and in the preservation of our freedom of action.

The effect on public confidence—and, consequently, on our ability to stand firm against Soviet gambits, large or small—of public knowledge that we possess alternative means of reacting, that we can (and do) choose among these alternatives in accordance with the magnitude of the threat, and that we can (and do) use the

chosen method effectively and promptly could be the best of tonics for our present malaise, the best of stimulants for our current hesitations.

Let us begin with the problem of nuclear deterrence. Deterrence has for its primary target the hostile decision-making processes. It is hardly necessary to threaten a rational Soviet leadership with the total destruction of the Soviet society down to the last man, woman, and child in order to deter that leadership from trying—for example—to push us out of Berlin, or from launching a punitive missile at one of our allies from whose territory they profess to believe a plane has penetrated their sacred airspace. It is merely necessary that the Soviet leaders should be certain beyond any doubt or any hope of avoidance that if they commit a given act of aggression, a given—and unacceptable—retaliation will ensue.

Mobile Launching Sites

Our means of delivering this retaliation must, of course, be secure against surprise destruction by any means available to the Soviets. This security can be found, as against ballistic missile attack, in the use of mobile launching sites. These can be mobile missile carriages on land, especially where terrain conditions offer adequate concealment; they can be submarines (or indeed surface ships) at sea; or they can be—when we get such things—nuclear-powered aircraft which can remain in the air for long periods of time, and hence avoid periodic return to fixed airfields.

The first two types of mountings are available now, or soon will be, in the Army's *Pershing* and the Navy's *Polaris* system. The nuclear-powered aircraft should be gotten off dead center and its development accelerated. Conventional aircraft operated from aircraft carriers, or from a complex of dispersed landing strips, also have a high survival factor against surprise destruction. Vertical

takeoff and landing and short takeoff and landing types will increase the possibility of dispersal and concealment of land-based machines. Naturally, there are various methods for attacking all these systems, but none upon which the Soviets can count with calculated confidence, as they can on a ballistic missile surprise against fixed targets.

Range is, of course, a factor which governs the effectiveness of all retaliatory systems. At sea, there must be some means for bringing the retaliatory weapon within reach of the desired target, which can be done by concealment (submarines) or by providing the necessary covering forces for surface ships. On land, a friendly operating area is needed such as that provided by our North Atlantic Treaty Organization. The same is more likely to remain available if the people of the host country understand that the weapon, being mobile and concealable, does more to protect than to imperil them.

A nuclear retaliatory armament having the quality of survival through mobility can be developed in volume as future circumstances require. It need not match, megaton for megaton, any given volume of Soviet fixed-base missile fire. It need be sufficient only to deter by the certainty of its retaliation. Considering the character of the tightly controlled Soviet system, and the stake which its leadership has in the uninterrupted continuity of their control, the certainty that, say, 20 thermonuclear explosions would take place within their heartland if they did so-and-so probably would deter them from even threatening to do so-and-so too loudly and firmly, much less doing it.

The existence of such an armament, indeed, may well have the effect of deterring the Soviet planners from going ahead with large-scale development of their intercontinental missiles. They are quite capable of figuring out equations in missile mathematics themselves, and they are quite aware of the penalties that would fall on

the just and the unjust alike in case of a large-scale nuclear exchange.

Nuclear Stability

Thus a factor of stability might well be introduced into the nuclear balance of power, and the likelihood of the nuclear holocaust ever taking place might recede to the vanishing point because no rational being, Communist or non-Communist, could perceive any advantage in commencing nuclear hostilities, or taking chances which might have that dire result.

This, however, would be no assurance in itself against limited Soviet or Red Chinese aggressive ventures; nor against local turmoils incited by Communist agitation. Against these we could not—in all likelihood—employ nuclear retaliation at all. Indeed, it is more than probable that even the tactical use of nuclear weapons would be politically as well as tactically inappropriate in many imaginable circumstances: nonlethal chemical agents might be more useful on occasion. Our dependence must, in any case, be on mobility—and once we have stabilized our nuclear deterrent capability in forms which assure its survival against surprise destruction, we shall have far ampler margins of annual resources to provide the necessary mobile forces, by land, sea, and air, to deal with local emergencies and to aid our friends in building up indigenous defense capabilities of their own.

Whatever form and quantity of force might be called for in any such circumstances, the primary need is timely arrival of the required units in the danger area. For the Army, this involves the question of strategic airlift—at least for the lead elements of any Army force which might have to be moved out from the United States to meet a sudden emergency. Under existing roles and missions directives, the provision of strategic airlift is an Air Force responsibility. The failure of the Air Force to meet Army requirements has been said to be largely

a matter of money—both for the purchase of modern transport planes and for the allocation of enough planes to Army use to assure their immediate availability over and above programed Air Force requirements. This situation has become more serious with every passing year.

If our expenditures on deterrent systems can be stabilized at a reasonable level, more money could be made available for other purposes, including airlift. But this is not all. If "nuclear stabilization," nullifies the premium of surprise nuclear attack from the Soviet viewpoint, the Communists are virtually certain to seek to exploit limited situations in pursuit of their expansionist purposes. Hence from our viewpoint, airlift for "fire brigade" forces should have a much higher priority. This applies, naturally, not only to the strategic airlift needed to transport spearhead elements from the United States to the airfield nearest the danger area, but also tactical airlift to move the troops into the actual operating area and ensure their deployment under favorable tactical conditions. The latter should certainly be handled by Army aircraft. Simplicity of organization suggests that Army aviation should be given the whole mission.

More and better sealift, and a better positioning of overseas airfields, local supply depots, and other facilities are needed. These goals could be realized by stabilizing the outlay for nuclear weapons. We also could provide better armament and better protection for our mobile forces through the whole range of requirements; from new small arms and tanks to anti-submarine equipment, to say nothing of more trained manpower for both active and reserve forces.

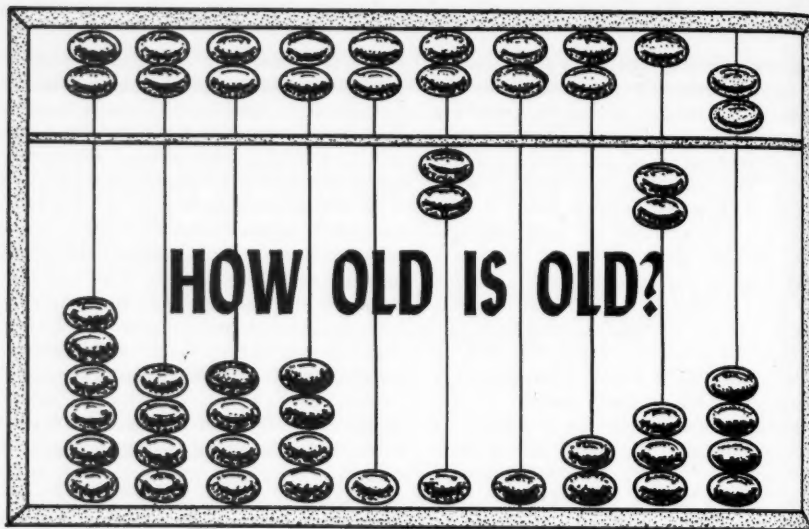
Perhaps most important of all, the implementation of an active, mobile military policy would stir the imagination and renew the confidence of the American people, because activity and mobility are consistent with the American na-

tional character and experience. Such a policy would be supported because it would be believed in instinctively, which is more than can be said for the policy of static missile confrontation toward which we are now drifting by annual increments.

It is not suggested that we abandon defensive weapons systems altogether, but we shall have greater resources for their development and perfection if we can stabilize our expenditures on deterrent systems at a reasonable level by giving them immunity from surprise destruction through mobility. Our cities we cannot move. They are unlikely targets while mobile deterrent power roams the earth ready to retaliate. But the development of defensive weaponry will have both military and morale value if kept in balance with other elements of armament. Reconnaissance, warning, and communications satellites fall into the same category. Current progress suggests we need not fear being overmatched by our competition in this field. Conceivably, a good part of the resources already committed to fixed-base missiles might be gradually diverted to further satellite development as the mobile retaliatory systems increase.

Conclusions

What is needed now is a basic policy decision to shift gears in favor of mobility as against static defense. Naturally we have to begin where we are. We cannot just junk everything that is inconsistent with the new order and start over. But our basic weapon, upon which the security of the United States and of the Free World ultimately depends, is the American people. In each American individual there is a mind and a heart. The weapons we choose are not dictated by popular vote, but unless they are such as to command the popular confidence they will be of little value to us either as deterrents or defenses. Americans would take new hope in knowing that their safety was based on the freedom of action of mobile forces.



Lieutenant Colonel Francis J. Kelly, *Armor*
Faculty, U. S. Army Command and General Staff College

ALEXANDER was 22 when he crossed the Hellespont.

Hannibal at 31 had taken command of the Carthaginian Army in Spain, had crossed the Alps, had fought the Second Punic War, and had defeated the Romans at Cannae.

Napoleon at Austerlitz was 36, and Clausewitz began his treatise on war at 39.

Genghis Khan was 41 when he invaded northern China and went on to conquer "the world."

Even a cursory examination of military history reveals the comparative youth of the tactical and strategic masters of the ages. United States military history, beginning with Washington who was 43

when he assumed command of the Continental Army, reveals no less emphatically the accomplishments of young leaders; at least through the formative years of our history.

If the mirror of history is held up to World War II a somewhat different image shines through. The better-known leaders comparatively were advanced in years when the war started. Using 1940 as a reference date, note that Eisenhower was then 50 years old; Wavell, 57; Montgomery, 53; Patton, 55; De Gaulle, 50; Krueger, 59; and MacArthur, 60. World War II, with its emphasis on Allied and inter-service planning and participation, restricted the opportunity for individual

History discloses that comparatively youthful officers have created and conducted outstanding military operations. Recognition of this fact may indicate the need for reevaluation of certain personnel procedures

milit
ical
trace
creat
betw
think
A
the
Crea
to de
and
hand
diti
of ex
of ju
sense
and
furth
sepa

Th
foll
devel
alert
ercis
cern
exerc
of th
build
respo
ment
cienc
devel
sion
ordin

Li
a me
Com
grad
he re
Scien
in 18
the
he s
and
fice
Depa
fice
ing a
Wea
with

military brilliance. No singularly historical moments of that conflict are directly traceable to any one individual's dynamic creation. Does this suggest a relationship between the ability to perform creative thinking and chronological age?

A distinction must be made between the concepts of creativity and judgment. Creativity means the autonomous ability to devise novel and unique concepts, ideas, and solutions. Judgment, on the other hand, is more precisely a reaction to conditions whereby the reaction is a resultant of experience and precedents. This sense of judgment is totally different from the sense of creativity, much as the art dealer and the artist. Both are necessary for the furtherance of art, but both are equally separate in functions and results.

Mental Exercise

The development of the mental process follows a pattern similar to the physical development of an individual. The mind is alerted early in life to the need for exercise through curiosity, investigation, discernment, and resolution. Each mental exercise builds the capacity and dexterity of the mind much as physical exercise builds the muscles and conditions physical response. As is true of the physical, the mental capacity will reach a peak of efficiency at some indeterminate period in the development process. Were this progression graphically presented, the vertical ordinate would represent levels of mental

efficiency and the horizontal ordinate, years of age.

An individual graph would start at birth with an approximately zero mental level and, thereafter, as a function of age, the mental growth would rise in an approximate curve, reach a plateau, level off, and be followed by an incidence of decline. This decline does not imply an abrupt drop into senility, but rather a slackening of creative mentality for which is substituted a more or less profound ability for conditioned reactionary response. The mental achievement plateau is higher or lower, more expansive or less, depending on the individual. Precisely where in the span of years this plateau is reached also is entirely subjective and influenced by many internal and external factors.

Military Achievement Plateau

If it is conceded that most military successes of signal distinction have been accomplished by comparatively young officers and that no really significant historical exploit has been creatively produced by individuals over 50 years of age, it might be deduced that the average mental achievement plateau of the military man is reached sooner in life than is the case with the average industrialist, businessman, scientist, lawyer, or other professional man. Many members of these fields can be cited as living proof that the creative capability period extends into the fifth, sixth, or even later decades of life, whereas, on the record, the military peak of achievement is reached rather early in life in perhaps the third, and rarely later than the fourth, decade.

What then are the implications, if such a deduction is valid? Among others that come to mind are:

1. External stimulus is needed to extend creativity.
2. Adjustment of retirement programs may be in order.
3. A potential effect on career planning must be recognized.

Lieutenant Colonel Francis J. Kelly is a member of the faculty of the U. S. Army Command and General Staff College. A graduate of the University of Maryland, he received his Master's degree in Political Science from Georgetown University, and in 1957 completed the Regular Course of the USA CGSC. During World War II he served in Europe with the 1st Army and subsequently was assigned to the Office of the Assistant Chief of Staff, G3, Department of the Army, and to the Office of the Chief of Staff, US Army. During a tour in Korea, he was Chief, Special Weapons Instruction Team, 8th Army, and with the 1st Cavalry Division.

There is an obvious need to stimulate autonomous mental creativity in the present world frame. The old game of "act and react" cannot become the order of the day, for Communist ideology and practices have not provided many precedents by which conditioned reactionary judgments can be derived.

Retirement Age

In the days ahead, the Army would do well to reflect on some archaic principles of personnel management which have survived from the distant past to the nuclear present. Specifically, the question of the appropriate retirement age might well be examined to determine its place in the modern frame.

During the 60-year span since the turn of the century, retirement age for Army officers has been fixed at an arbitrary ceiling without regard to actuarial computations, extension of the life span, geriatrics, or its true impact on the national defense posture. Thus the question is raised—how old is old, militarily? If the purely military aspects of the profession obtain—and included is an acceptance that the achievement plateau is reached early in military life—then unequivocally, the exercise of the military profession in all phases is a young man's game.

The rigors and demands of field life and troop leadership, if utilization of the creative capacity is also to be exploited, would direct some equation between positional responsibility and physical age. For example, with these criteria it could be held that a battalion commander should not be older than 30 years, a regimental (battle group) commander not older than 34 years, a division commander not more than 40 years old, and so on up the scale. Certainly, in order to manage the policy positions at departmental level, some admixture of creativity, judgment, and experience is desirable. Under present personnel programs, which have not materially varied since World War II, the

external stimulus for improvement should be provided by such devices as promotion examinations.

Except in the grossest cases, promotion is achieved by longevity. At the point for selection to field grades the boards discern between "fully qualified" and "best qualified." An effort to reach into the creative group was propounded recently through the medium of nominating individuals in the "truly outstanding" category. The unescapable fact is that all these devices are objective in nature, depending on so many variables that the reliability of the entire system becomes suspect.

Vital Competition

The problem is acute. High retirement rates (after the minimum service period) and resignations (after prescribed tours) plague military personnel planners. Since this is a fact of life, why not recognize it by lowering the retirement age to the achievement plateau level, perhaps as low as 42 years? Instead of keeping individual officers on duty to some nether period such as 55 years (or five years in the permanent grade of colonel), why not reverse the process by establishing a retirement age, whereby retention thereafter, and ultimate accession to the departmental and high level policy positions, would be the result of subjective efforts to prove worthiness? Herein the stimulant—vital competition—becomes an active personal prod, rather than the current impersonality of achieving stature by time.

The means by which extension of duty past this lowered retirement age could be effected might include such diverse elements as combat record, troop experience, staff positions, competitive examinations, military and civilian education achievements, and job performance. The end result would be to require maximum personal effort on each officer's part in an atmosphere of subjective competition to stay in the Army.

should
emotion
emotion
int for
s dis-
"best
to the
recently
g indi-
cate-
at all
re, de-
at the
becomes

If a particular individual were not selected for extension, he would be sufficiently young to enter another field. If such a course of action seems devoid of feeling, it is an irrefutable fact that progress within the Army can't be tied to sinecures. It is no less a fact that the last 10 percent of an individual's service often is spent in an area where he will retire, or in a position which will provide some secondary benefit such as educational opportunities. Both circumstances frequently are accompanied by long and tortuous maneuvering of careers before fruition.

Mediocrity

Invariably, it is cited that certain individuals—for example, Eisenhower and De Gaulle—went on to produce creative triumphs. Admittedly, this is true—but the triumphs were in other fields of en-

deavor, not excluding the extraordinary capabilities of these two officials. There is a further apparent refutation of the paradox of age versus creativity when one observes the stellar performances of a Baruch, a Churchill, an Adenauer, a Schweitzer, or an Einstein. Not disclaiming the amazing powers of any of these luminaries, recall that their latter stature derives from fields other than the military.

While selecting the most promising of the officer crop, one might wonder whether such a program would discourage or eliminate the mediocre officer. Perhaps not—as in any field of endeavor, there always will be a certain amount of mediocrity. What is so often disturbing is the complacency with which this mediocrity is sometimes accepted. In struggles rooted in ideology, second-rate performance is fatal.

ement
eriod)
tours)
Since
nize it
to the
as low
ividual
period
e per-
verse
ement
nd ul-
al and
be the
orthi-
com-
prod,
ity of

The **MILITARY REVIEW** welcomes your comments on any material published. We do not publish letters to the editor, but we will make good use of your ideas and suggestions. An opposite viewpoint or a new line of thought will assist us and may lead to publication of your ideas. If you are an authority on a certain subject, why not write an article for our consideration? If you have only an idea, query us; perhaps we can assist you in developing an acceptable article.

f duty
uld be
e ele-
cience,
ations,
hieve-
nd re-
a per-
in an
on to

The Generalship of José Félix Estigarribia

Captain David H. Zook, Jr., *United States Air Force*
Faculty, United States Air Force Academy

THE Chaco War of 1932-35 established the reputation of the victorious Paraguayan commander, José Félix Estigarribia, as a military genius of the first order. Through superb generalship, while commanding the forces of a country with fewer than a million persons and negligible economic and industrial capacity, he overcame the army of Bolivia—a nation three times larger than Paraguay and with far greater resources. Estigarribia never had more than 30,000 men. He lacked ground transport and air support and lack of even water denied him the use of his cavalry. Logistics were a nightmare, the poverty of his country forcing the utmost economy upon materiel expenditure. Despite these handicaps he achieved a succession of victories over his numerically superior opponent.

In June and July 1932, when Bolivian forces seized the Paraguayan posts guarding the loosely defined and frequently disputed Chaco frontier, Lieutenant Colonel Estigarribia was the regional commander. Small in size and mild in manner, he had been in the army since 1908. He was characteristically introspective. Neither his manner nor his austere field uniforms—the sleeves invariably too short—differentiated him from his staff. But intellectual achievement set him apart. He was a 1927

graduate of the École de Guerre where he had been exposed to European ideas and French doctrine. A favorite of Foch, he was destined to surpass the master.

Estigarribia's strategic concepts bridged the two World Wars. He understood the vital importance not only of Foch's emphasis on morale, but also of its use in combination with the nearly forgotten art of maneuver. He learned early the lesson of the superiority of firepower revealed by World War I. To cope with it he employed the mobility, speed, and indirect approach characteristic of tactics in World War II. He anticipated the possibility of war in the Chaco environment and studied for it. Consequently, when the conflict started, Estigarribia was well-prepared.

The scene of the war was the central and western Chaco Boreal in the fork of the Paraguay and Pilcomayo Rivers. Thick scrub interspersed with occasional grassy clearings cover the area. The land grows increasingly arid as one moves westward. Water is plentiful only during the rainy season, which indiscriminately turns the primitive roads into streams of bottomless mud from December to May. Seven hundred miles of such roads linked the enemy garrisons with the nearest Bolivian railroad. The Paraguayan forces, on the other hand, shipped by water up the Rio Para-

This great soldier stands squarely between the two World Wars. Learning from the first, he applied original concepts which anticipated the second. American military heritage is richer because of his foresight

guay to Puerto Casado and thence inland by means of a 100-mile, single-track railroad.

Estigarribia fully realized the advantages he thus enjoyed in time and space, as well as for operations on interior lines. Believing that Bolivian concentration would require three months, and hoping to initiate operations before enemy forces could converge, he called for rapid general mobilization. The national administration supported him fully by expanding the army and by placing the nation on a war-time footing. The people responded enthusiastically.

Boquerón

Paraguayan intelligence indicated that Bolivia would employ 12,000 to 15,000 men in the main theater within 60 days; in July 1932 the Paraguayan Army stood at 4,100. The General Staff consequently planned a strategic defense and a tactical offense closely bound to the railroad. Estigarribia, however, realized that motor transportation would make possible both mobility and flexibility, even in the jungles of the east central Chaco. Thus he hoped to attain through battle his primary objective—destruction of the enemy army. In his judgment the reciprocal attraction of forces would enable him, once he had achieved local superiority through earlier concentration, to draw the enemy to the sector of his choice and destroy him.

In choosing his center of gravity and line of advance, Estigarribia astutely considered communications and availability of water, factors which he knew could be tactically decisive in the scrub thickets of the parched Chaco. He, therefore, se-

lected an axis through the enemy's strong point, Boquerón-Arce. The latter was not only the Bolivian advanced headquarters, but the nearest fort with an abundant water supply. Eyeing his calendar, Estigarribia noted that the approaching rainy season would limit the duration of his offensive.

Boquerón, which surrendered 29 September, was the first important battle of the war because it gave Paraguay an enormous moral advantage which she never relinquished. Optimism swept the country, while Bolivian morale suffered. By successfully massing superior forces (about five to two) upon the decisive point, Estigarribia attracted the enemy units destined for offensive operations, defeated them in detail, and thus seized the strategic initiative. Tactically, Estigarribia's Stokes-Brandt mortars proved dominant, but the firepower of Bolivian automatic weapons in field fortifications paralyzed Paraguayan frontal attacks.

Following through on his victory, Estigarribia advanced cautiously on a broad front. Since his poverty-stricken country could have replaced only with difficulty the losses that would have accompanied defeat, he exercised extreme operative prudence. By mid-November the advantage he had gained in time was overcome by the arrival of heavy enemy reinforcements which blunted the Paraguayan advance and thereby restored equilibrium. When the rainy season began in December 1932, Colonel Estigarribia's mired truck convoys crippled his logistics. Consequently, he adopted an offensive-defense during which he rested and regrouped. He knew that the advantage of the defense would enable him to profit cheaply from the enemy's every failure, shortcoming, or error.

In December, Bolivia recalled from abroad General Hans Kundt, a naturalized citizen in whom some reposed the utmost confidence. Estigarribia had studied Kundt's conduct as a German brigade

Captain David H. Zook, Jr., is an instructor in Military History at the United States Air Force Academy. He has held various psychological warfare assignments in the Far East, including command of Air Force detachments with 1st Loud Speaker and Leaflet Company, 8th US Army Korea. He holds a Ph. D. degree and is the author of the forthcoming book, The Conduct of the Chaco War.

commander and found that he was an energetic, self-confident, tenacious devotee of offensive operations, often fighting without reserves or artillery support.

Estigarribia quietly planned how the man could be made to defeat himself; how, in effect, his own methods—precursors of World War II techniques—

in the line and the recapture of Alihuatí rewarded this prodigious expenditure of men and materiel.

Campo Vía

When Estigarribia felt that he had gained maximum benefit from the defense, he began weighing possible offensive op-

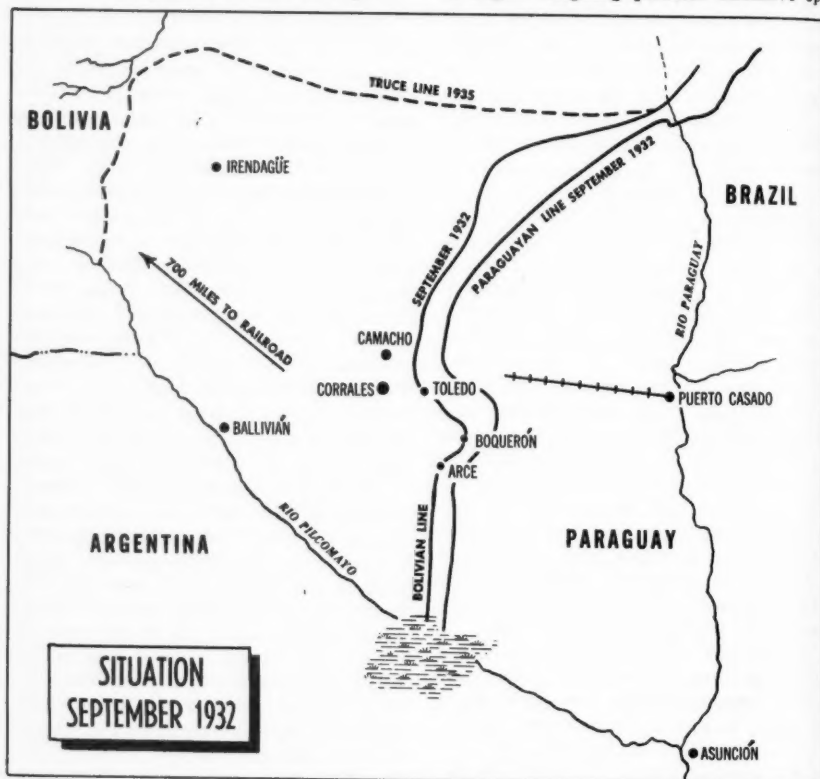


Figure 1.

would overcome Kundt's antiquated World War I approach. In frontal attacks on Nanawa, Fernández, Corrales, and Toledo—all field fortresses of debatable strategic worth—Kundt squandered the blood of at least 12,000 men, thus fulfilling Estigarribia's expectations. Only a salient

erations. On a small scale, his army had demonstrated the remarkable ability of Paraguayan citizen-soldiers to execute far-ranging maneuvers which required the initiative and coordination usually achieved only by long and thorough training. Estigarribia, who understood the

value of morale and maneuver, now determined to utilize these assets on a grand scale.

Aware of Clausewitz' dictum that "the success of the whole engagement consists in the sum total of the successes of all partial engagements," he began pyramiding local victories into a great battle of annihilation. Meanwhile, in September 1933, Estigarribia was promoted; after a year of war, Paraguay's 25,000-man army was at last commanded by a general officer.

Shifting troops from other sectors, Estigarribia gained local superiority with an army now organized into three corps. He began attacks on a 75-mile front 23 October 1933, seeking to fix the enemy lines and stretch them until they absorbed all Bolivian reserves. He realized that Kundt's addiction to ground would prevent him from retreating even when his cordon was at the breaking point, and, therefore, Estigarribia proceeded toward a massive double envelopment.

To consummate his plan, he assumed personal command on 3 December and applied his powerful will to overcome inertia and friction. Three days later the Bolivian 4th and 9th Divisions were encircled; when their 8,000 men surrendered (11 December) at Campo Vía, the back of the Bolivian Army was broken. Kundt was removed from command. Again Estigarribia had obtained an impressive victory through retention of the initiative and use of locally superior forces in skillful maneuver.

Greater decisiveness might have meant the strategic envelopment of the remaining Bolivian 7th Division, but Estigarribia did not drive his tired army forward in a vigorous pursuit. There followed a truce which Bolivia used to hastily create a new army, and war resumed on 6 January 1934. Thereupon, Estigarribia began a creeping pursuit—rendered so by the mud of the rainy season—and the enemy gradually

retreated. Expelled from his old line of forts along the disputed frontier, the Bolivian foe now was on the defensive.

Estigarribia soon conceived a daring new plan to annihilate the enemy. He envisioned construction of a road westward to the Rio Pilcomayo to envelop the enemy strategically against the river. If successful, the Bolivians would be obliged to surrender or cross into Argentina and be interned. Unfortunately, the enemy, with leisurely reconnaissance born of absolute air supremacy, discovered the road when it was only 100 miles long. In order to penetrate the Bolivian lines thrown across his path, Estigarribia attempted an envelopment in May 1934 near Cañada Esperanza. The enemy brought up fresh troops for a partially successful double envelopment of his own, taking about 1,500 prisoners from two Paraguayan regiments.

El Carmen-Irendagüe

Determined and forceful, Estigarribia took rapid measures to deny the enemy the fruits of the victory; consequently, it proved of little importance. He wisely continued to regard a breakthrough to the Pilcomayo as the only viable solution to the existing stalemate. Formulating another plan, Estigarribia used fast-moving motorized infantry to drive a strategic feint deep into enemy territory. Overestimating the strength of the threat, the Bolivian Army weakened itself by shifting troops from the main sector.

Once these forces—the new cavalry corps—attained predominance over the light Paraguayan column, Estigarribia ordered his troops to retreat as slowly as possible, drawing the enemy along and holding the attention of its command. He then prepared for one of the most nearly perfect battles ever executed in the Western Hemisphere.

Paraguay was in serious straits. Her economy was staggering and she was financially desperate. Estigarribia knew

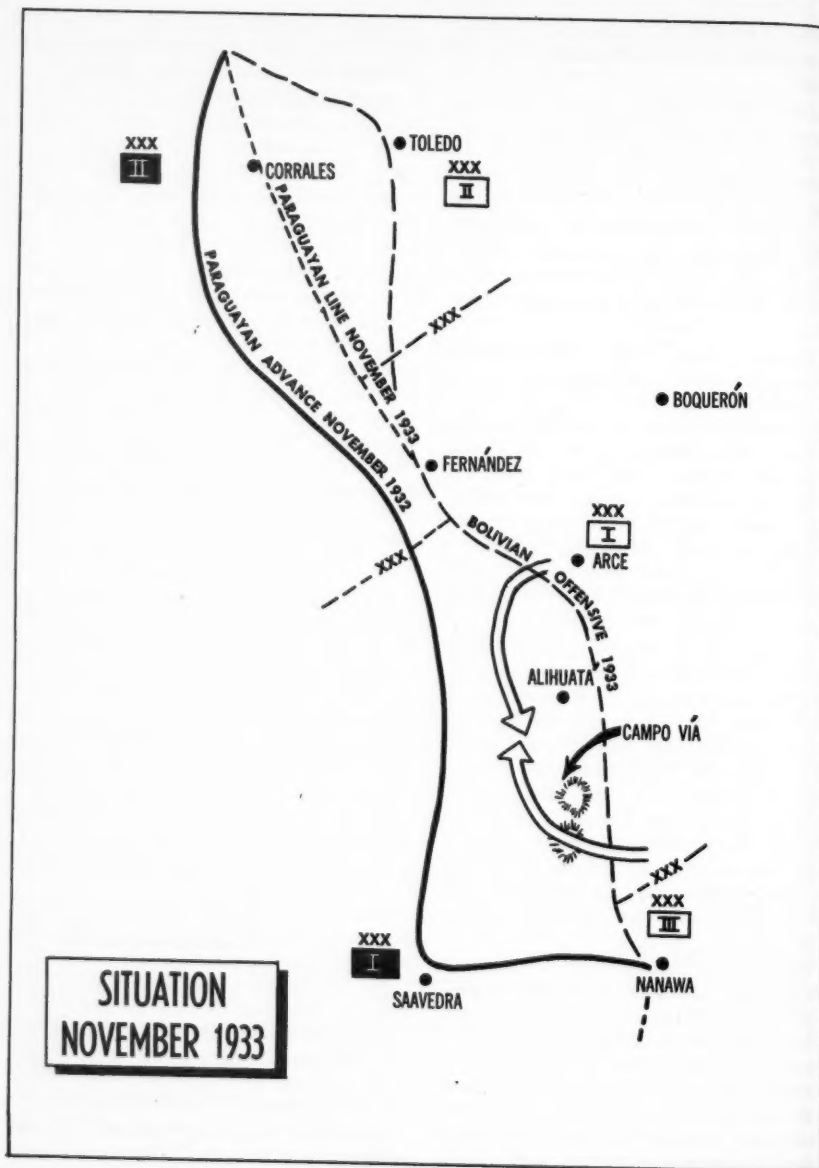


Figure 2.

an immediate, decisive victory was imperative. Having attracted the main Bolivian attention to a secondary sector, he returned to his old plan, seeking a breakthrough to the Pilcomayo. Upon locating gaps in the front at Cañada El Carmen, he directed his I Corps commander, Colonel Carlos J. Fernández, to push a division through each opening, the troops to hack trails in the brush as they went. The

general retreat, seeking to withdraw before the Paraguayans could reach the river. At the crucial moment, Estigarribia lacked mobility. Humanitarian considerations outweighed others. Never abundantly supplied with trucks, he used what few he had to haul thirsty, starving, dying prisoners to the rear. Unable to trap the retreating enemy, he shifted his attention to his right. There, the enemy's cavalry

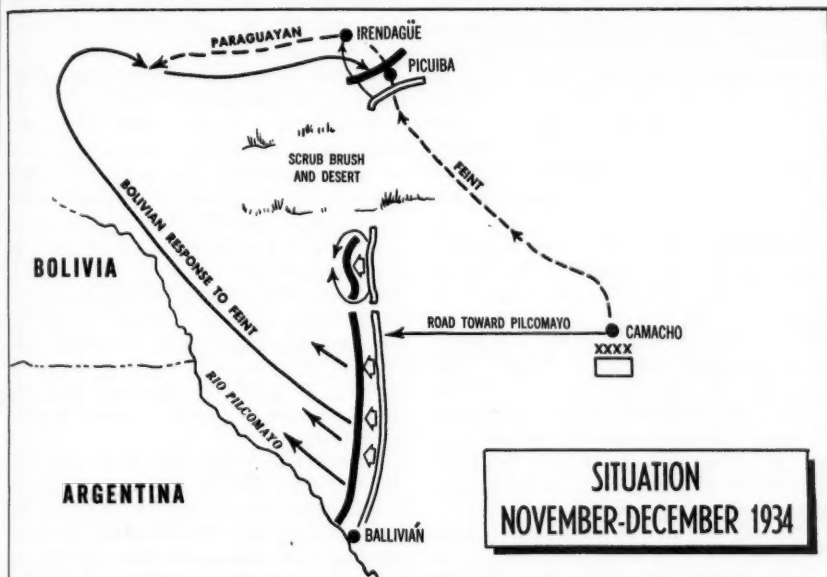


Figure 3.

result was the faultless double envelopment, completed 15 November 1934, of the Bolivian Reserve Corps. Once more Estigarribia had gained local superiority (11,000 to 9,000) by stripping other sectors. Again his choice of the decisive point and center of gravity was flawless. Through Colonel Fernández' brilliant execution of the maneuver, a strategic penetration was at last achieved and Paraguayan troops poured toward the Pilcomayo River.

The Bolivian command commenced a

corps, in an advanced position, had but one source of water—the wells at Irendague, a tiny settlement in the wasteland. Having always appreciated the importance of water, Estigarribia again directed a division to cut through the brush and to strike the Bolivians at their most vulnerable point.

In early December 1934, after breaking 25 miles of trail, the Paraguayans captured the wells. Although the cavalry corps commander attempted to recoup the

loss, he no longer could control his thirsty men. Bolivian morale had never recovered from Boquerón, and the long succession of defeats drove it steadily downward. Thousands died of thirst and the corps was utterly destroyed.

For the third successive year Estigarribia had gained major victories immediately prior to the rainy season. By brilliant maneuver—executed through the exceptional capability of the individual Paraguayan soldier—and by skillful exploitation of the morale advantage, he had defeated a Bolivian Army twice as large as his own. His combined triumphs of El Carmen-Irendagüe marked the strategic climax of the Chaco War. Thereafter, the Paraguayan offensive exhausted itself rapidly in attempts to continue the long advance.

Re-outfitted with the immense booty, Estigarribia's army prepared for an invasion of the Bolivian departments or states. But he and the President knew that this was an empty threat in support of a diplomatic offensive. Supply lines were now 700 miles long in places and the enemy, not Estigarribia, was operating on interior lines. Paraguay's logistic system was inadequate to sustain the army in its forward positions under the burden of the next rainy season.

But the enemy had become convinced of his own failure. Estigarribia's aim of annihilating him had proved possible in tactical situations but, due to the Bolivian population advantage, was ultimately doomed to failure. The enemy merely created new armies of increasing size.

Evaluation

José Félix Estigarribia possessed the steadfast character needed by a great general. He devoted himself to constant re-

assessment, thus evidencing flexibility of thought. He was the embodiment of the combination of wise theory and character which Jomini and others have asserted is essential in a great captain.

Estigarribia's understanding of political factors in war was complete. He was consulted on diplomatic policy and worked in close harmony with the government; he provided close military support for diplomatic moves. He clearly grasped grand strategy and had an active role in its formulation.

As a field general Estigarribia understood the importance of interior lines, adequate logistics, proper center of gravity, selection of the decisive point, unification of local successes into great triumphs, gaining and retaining the initiative, concentration of combat power, and the conservation of resources. His adherence to all the currently accepted principles of war was notable and manifest in each of his victories. He was a master in gaining offensive surprise. His only significant failing lay in his inability to effect successful pursuit; in part this stemmed from his humanity—the humanity possessed by only the great.

Some might argue that from the size of his forces Estigarribia was at most a skilled army commander. On the contrary, the scope of the Chaco—especially considering time and space relative to primitive communications—made of him in reality a theater commander of great capacity.

As an innovator, he stands squarely between the two World Wars, understanding the one, anticipating the methods of the other. As such, his conduct of one of the hemisphere's major conflicts is worthy of deeper study and a more prominent place in military history.

ility of
of the
character
erted is

political
as con-
rked in
ent; he
r diplo-
grand
in its

under-
es, ad-
ravity,
ication
umphs,
e, con-
ne con-
ce to
les of
ach of
aining
at fail-
cessful
m his
y only

e size
most a
trary,
con-
primi-
m in
great

arely
stand-
ds of
ne of
orthy
inent

MILITARY NOTES

AROUND THE WORLD

UNITED STATES

'Honest John' Improvements

The reliable *Honest John* long-range artillery rocket is undergoing major modification and improvement both in the propulsion system and in the variety and effectiveness of its warheads. Field tests recently conducted at Fort Bliss, Texas, checked out a new rocket motor and propulsion chemical which will add 15,000 yards to the weapon's range.

New high-explosive and nuclear warheads will be more powerful and a new chemical warhead will improve its versatility. While retaining the ruggedness of the old rocket, the new *XM-50* rocket will be a half ton lighter and three feet shorter than its predecessor.—News item.

Turbine Powered Jeep

The Army Ordnance Corps is testing a lightweight gas turbine as a power source for small vehicles. The engine weighs only about 50 pounds and develops 75 horsepower. Without gearcase and accessories it measures 10 inches in diameter and is 19 inches long. Under a contract awarded by the Detroit Ordnance District, the engine is being installed and tested in a jeep and is said to be the smallest gas turbine ever tested in a vehicle.—News item.

Freeze-Dried Foods

Of possible value in the development of field rations for military use is a new process for the dehydration of foods known as the "freeze-dried" method. Fresh or prepared foods are quickly frozen, ice crystals are removed by a vacuum process, and the food is sealed in a suitable moistureproof container. When the food is to be used containers are opened, water added, and the food is restored to its original weight, size, and appearance.

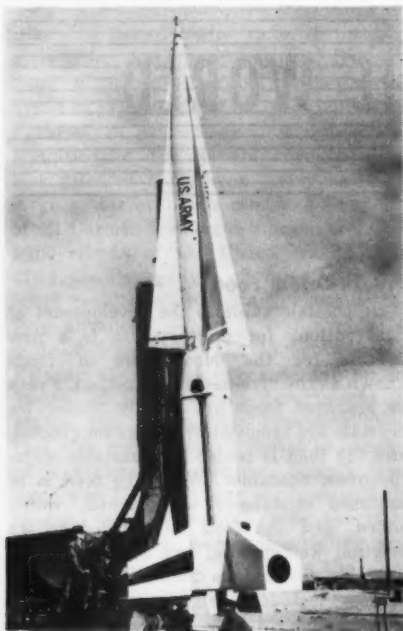
Major advantages claimed for the new process include a significant saving in storage and shipping weight. One pound of freeze-dried food is equivalent to four pounds fresh food. The process is said to have little effect on taste. Food can be stored without refrigeration.—News item.

Aviation Fuel Filter

A portable filter-separator for removal of water and solid contaminants from aviation fuel is under development by the Army. Designed for use in the field, the unit will have a capacity of 20 gallons per minute from 55-gallon drums. A prototype of the filter weighs 50 pounds, is 30 inches long, and eight inches in diameter. Procurement of 25 units has been authorized for field testing and operational evaluation.—News release.

More 'Nike Hercules' Units

Fifteen *Nike Ajax* air defense batteries deployed in defense of the metropolitan areas of Washington-Baltimore, Los Angeles, Philadelphia, New York, San Francisco, Chicago, and Detroit will be



US Army

Nike Hercules air defense missile

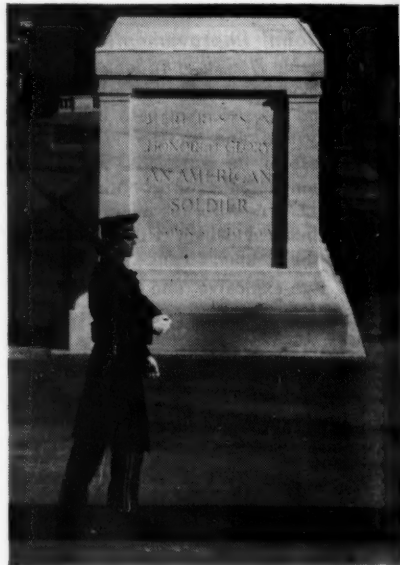
replaced by *Nike Hercules* batteries in the near future. The *Hercules* units located at or planned for seven airbases in the Continental United States and for Hanford, Washington, will be redeployed to meet the new requirement.

The *Hercules* has a greater range than the *Ajax* and can carry either a nuclear or a high-explosive warhead. In a recent demonstration, a *Nike Hercules* intercepted and destroyed a *Corporal* ballistic missile. It was the first known kill of a guided ballistic missile by another missile. —News item.

Arlington Cemetery Expansion

The Arlington National Cemetery near Washington, D. C., site of the famed Tomb of the Unknown Soldier, is to be expanded to include an additional 190-acre tract of land now designated as South Post, Fort Myer. Expansion will begin with the development of an 81-acre increment and will gradually take in all of the South Post. When completed, the development will extend the active life of the cemetery until about 1979.

Categories of persons eligible for interment in Arlington include members or former members of the Armed Forces whose service terminated honorably and



US Army

Tomb of the Unknown Soldier, Arlington

certain of their dependents. An average of two military funerals per day are conducted. Twenty-six horses, the last remaining on active service in the United States Army, are maintained at Fort Myer, Virginia, to draw the caissons used in these rites. —News release.

New Infrared Applications



US Army

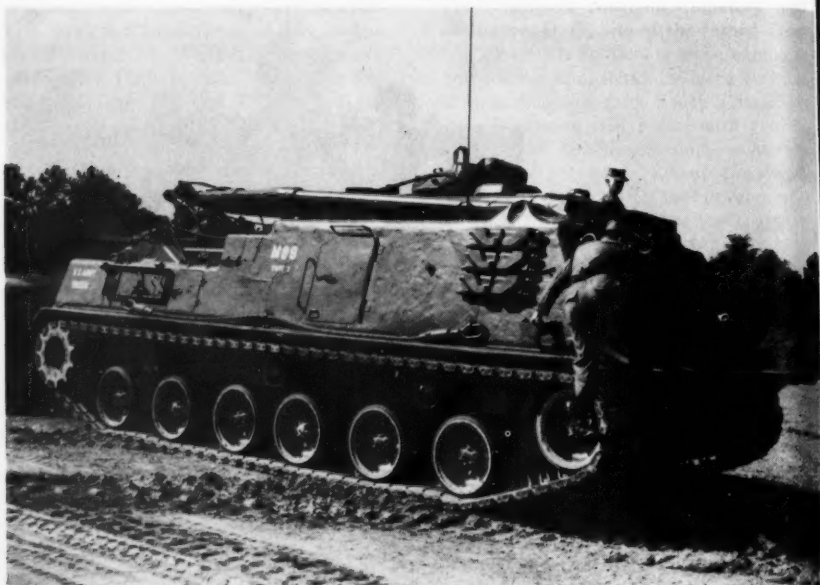
T-2 infrared thermograph

New applications of infrared phenomena recently announced by the Army include a jeep-mounted thermograph which senses the infrared thermals emitting from personnel, vehicles, or terrain and records the true outline of the object on polaroid film. Designated the T-2, the thermograph will negate the concealment normally afforded the enemy by darkness. The device is sufficiently sensitive to record body heat given off by personnel and solar heat, absorbed by materiel during the day, which is given off during the hours of darkness.

Other infrared devices include searchlights, periscopes, and binoculars which will enable tank operators to observe the enemy at night using either visible or

infrared light. Such items will be included in a tank kit being developed by the United States Army Engineer Research and Development Laboratories at Fort Belvoir, Virginia. The kit will include a xenon searchlight which operates in coordination with the tank gun. The beam of the searchlight can be varied in width and intensity in either light mode. A compatible gunner's periscope has both wide-angle and high-magnification channels using ordinary light and a high-magnification channel using infrared. A tank commander's periscope will provide him with a closed hatch infrared viewing capability. Open hatch viewing will be afforded by use of a hand-held infrared binocular.—News release.

'M88' Tank Recovery Vehicle



US Army

The Army's new tank recovery vehicle, the M88, has gone into quantity production. A contract recently was awarded for the manufacture of 212 of the new vehicles and deliveries are scheduled to begin in December of this year.—News item.

MOMAR Plans Revealed

The United States Army's future organizational plans were disclosed by a recent announcement of the Modern Mobile Army (MOMAR) concept which is planned for implementation in the 1965-70 period. Under MOMAR the present three types of divisions would be replaced by two, a medium division and a heavy division. Each division would have five combat commands of 1,500 to 1,900 men each.

The proposed divisions would be similar in structure but the heavy division would have more heavily armored vehicles to include armored artillery and armored personnel carriers. Both types would have a higher ratio of tanks than the current divisional structure and each combat com-

mand would have more than the five line companies now in the standard battle group. The number of organic aircraft would be more than doubled. Increased mobility, firepower, better surveillance, and improved command control would permit greater dispersion of forces with a combat command occupying nearly as much space in the battle area as was held by an entire World War II division.

A further study, designated MOMAR II, is in preparation and should reach the Department of the Army by late 1960 or early 1961. The MOMAR studies are designed to keep Army organization and operations ahead of the strides being made in technology.—News item.

'Skyb
The
advan
launch
the S
vance
develo
Sky
two-s
a nu
appro

'Skybolt'

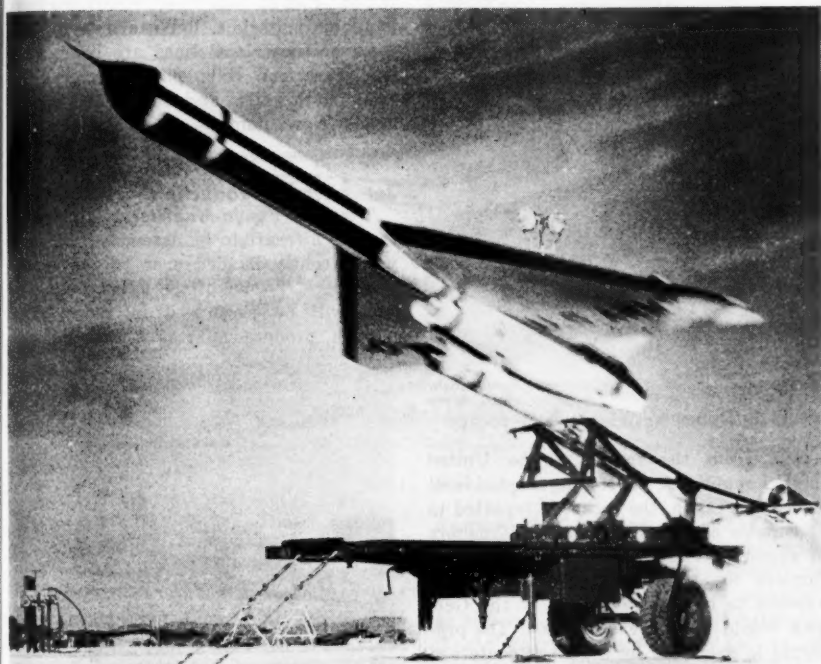
The *Skybolt*, one of several concepts advanced for a missile to be carried and launched from the manned bombers of the Strategic Air Command, has advanced from the design phase into a development program.

Skybolt is reported to be a hypersonic two-stage solid propellant missile with a nuclear capability and a range of approximately 1,000 miles after launch.

Test and developmental work will begin this year and the missile is expected to become operational in 1964.—News item.

Radiological Protection

The United States Army has awarded research contracts totaling one million dollars for investigating means of providing radiological protection for ground combat vehicles.—News item.

More Tests For Jet Drone

US Army

Testing of the Army's new high-speed jet surveillance drone, the AN/USD-5 (MR, Aug 1960, p 67) is continuing at Yuma Test Station, US Army Electronic Proving Grounds, Fort Huachuca, Arizona. Current tests involve flights at higher speeds and higher altitudes than initial trials. The drone is powered by a 3,000-pound thrust YJ60 engine. Its high speed will make it a difficult target for enemy fire.—News release.

USSR

Soviet Antitank Rocket

Models of the *RPG-2* armor-piercing rocket now being produced in the Soviet Union have been captured by Israeli



Copyright Bamahaneh,
Israeli Army

Israeli troops examine Soviet rocket

troops from the forces of the United Arab Republic. A short-range squad-level antitank weapon, the rocket is reported to be capable of penetrating 200 millimeters of armor at ranges up to 100 meters. It employs the hollow-charge principle and appears to be a development of the German World War II *Panzerfaust*. The projectile is propelled by a charge contained in a separate case which is attached to the warhead prior to firing. Foldable fins provide stabilization in flight.—News item.

COMMUNIST CHINA

Rail Expansion

Intent on providing transportation facilities necessary to support expanding

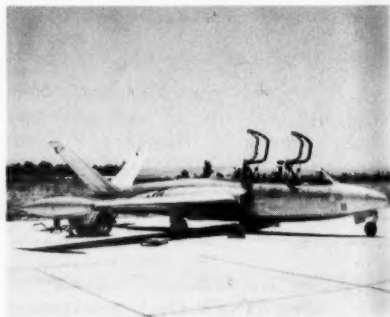
industrial production, Communist China plans to build 5,200 miles of new rail lines in 1960. A major project is the construction of a line from Lanchow, capital of Kansu Province in north central China, to Sinkiang Province in the extreme northwestern part of the country. The new line will link up with the Turkistan-Siberia railway at Aktogai. When completed, it will give China her first cross-country trunk and will provide a shorter link with the Soviet Union.

Other rail construction plans call for the building of local lines improvised from available materials. Reports indicate that some of these local lines are being built with cast iron rails, part of them have light steel rails, and some use wooden rails.—News item.

ISRAEL

Jet Aircraft Production

The first *Fouga-Magister* two-place jet trainer aircraft to be assembled in Israel was recently handed over to the Israeli Air Force. Twelve of the French designed jets will be assembled in Israel from French produced parts. Additional pro-



Government Press Office
State of Israel

First Israeli Magister

duction will use parts produced in Israel. The Israeli aircraft industry was started in 1953 and now employs approximately 2,000 people.—News item.

SOVIET HELICOPTERS

THE USSR has developed a series of rotary-wing aircraft ranging from the 55-horsepower, one seat *Ka-10* to the 4,700-horsepower *Mi-6*, capable of carrying 70 to 80 passengers.

Available details on each of the seven helicopters known to be in general use is given in the following paragraphs. This information has been gleaned from unofficial sources and, therefore, is incomplete in some respects.

Kamov 'Ka-10,' Hat

The *Ka-10* is a single-seat, light utility helicopter. It employs a single engine producing 55 horsepower at 4,500 revolutions per minute. Two contrarotating, three-blade rotors measure 20 feet in diameter. A simple tubular steel framework supports the engine, rotors, seat, and tail assembly. The *Ka-10* has a maximum speed of 72 miles per hour, a range of 120 miles, and a ceiling of 8,200 feet.



Ka-15, Hen

Kamov 'Ka-15,' Hen

The *Ka-15* helicopter is a two-seat, light utility helicopter developed from the basic design of the *Hat*. The *Ka-15* was first reported in 1956. Like the *Hat* it employs two counterrotating, three-blade rotors. A single 255-horsepower, nine-cylinder, radial engine gives the *Hen* a service ceiling of 9,840 feet, a maximum speed of 93 miles per hour, and a range of 298 miles. The fuselage is a metal frame with plywood covering. A large transparent plastic nose cover affords good visibility for pilot and passenger.

Kamov 'Ka-18,' Hog

The *Ka-18* is a four-seat development of the *Hen*. It first flew in mid-1957 and is now in series production. Adaptable as either a cargo or passenger helicopter, it can carry a payload of 440 to 660 pounds, has a ceiling of 9,900 feet, a cruising speed of 68 miles per hour, a maximum speed of 93 miles per hour, and a range of 435 miles when equipped with auxiliary fuel tanks. The *Hog* has a steel tube frame covered with a light metal skin. The engine and rotor systems are similar to the *Ka-15*.



Ka-18, Hog

'Mi-1,' Hare

The *Mi-1* is a general purpose helicopter which has been produced in at least four versions. A cargo carrier model, called the *Mi-1NKh*, is known to have been produced in quantity. In one configuration the *Mi-1* has four cylindrical collapsible floats supplementing the normal landing gear.

The *Hare* uses a single three-blade

main rotor and a smaller three-blade anti-torque rotor. A single 575-horsepower engine drives both rotors. Available performance data indicates that the *Hare* has a cruising speed of 60 miles per hour, a maximum speed of 115 miles per hour, a hovering ceiling of 9,800 feet, and a maximum range of 240 miles. It is reported to have an operating ceiling of 16,500 feet.



Mi-1, Hare



Mi-4, Hound

'Mi-4,' Hound

The *Mi-4* is a general purpose helicopter adaptable for both cargo or troop lift use. The military version of the *Hound* employs a two-man crew and can carry 14 troops, a GAZ-69 jeep, or a 76-mm antitank gun as internal load. It is powered by a single 1,700-horsepower, 18-cylinder, radial, air-cooled engine. A four-blade main rotor 68 feet in diameter and a three-blade antitorque rotor on the right side of the tail boom constitute the rotor

system. The engine is mounted in the extreme nose of the fuselage leaving the rear available for cargo or passengers. Clamshell doors under the tail boom provide easy access for military loads.

The *Hound* is reported to have a maximum speed of 116 miles per hour at 5,000 feet elevation and a cruising speed of approximately 100 miles per hour. It has a service ceiling of 16,000 feet and a range of 248 miles.



Yak-24, Horse

'Yak-24,' Horse

The Yak-24 helicopter has been in use with the Soviet Air Force since 1955. It is a tandem rotor transport helicopter employing two, four-blade rotors rotating in opposite directions. Each rotor is powered by a separate 1,700-horsepower, 14-cylinder, radial, air-cooled engine, either of which is capable of operating both rotors in an emergency. The forward cabin of the *Horse* can accommodate a three- or four-man crew. Access from this

cabin to the main cabin is provided by a passageway alongside the front engine.

Up to 40 persons or two GAZ-69 jeeps plus a light towed weapon are typical payloads. A rear loading ramp permits easy stowage of vehicles or heavy equipment. The Yak-24 has a maximum speed of 158 miles per hour, a cruising speed of 127 miles per hour, a service ceiling of 18,000 feet, and a range of 300 miles. Maximum load is reported to be 8,800 pounds.



Mi-6, Hook

'Mi-6,' Hook

The Mi-6 is the largest known helicopter currently flying anywhere in the world (MR, Oct 1959, p 86). First announced in 1957, the *Hook* is powered by two 4,700-horsepower, shaft-turbine engines mounted above the cabin. The five-blade main rotor has a diameter of 114 feet. A four-blade tail rotor provides torque control. In its latest form the Mi-6 is equipped with two small wings mounted above the main landing gear which off-load the rotor in flight. These wings are not present on the model shown above.

Available production figures indicate that six test models and 30 production models of the Mi-6 have been produced to date or are currently being built. The giant helicopter is reported to weigh 41,000 pounds empty and 70,000 pounds fully loaded.

It has a remarkable weight-to-height lifting capability and several world records in this field have been claimed for it by the Soviets. In one test the *Hook* is reported to have lifted 22,000 pounds to a height of 16,000 feet.

ided by
engine.
9 jeeps
cal pay-
ts easy
ipment.
of 158
of 127
18,000
ximum
s.

idicate
uction
duced
t. The
h 41,
s fully

height
d rec-
for it
ok is
nds to

MILITARY DIGESTS

AFRICA THE CHALLENGE

- **TOO LARGE**
- **TOO COMPLEX**

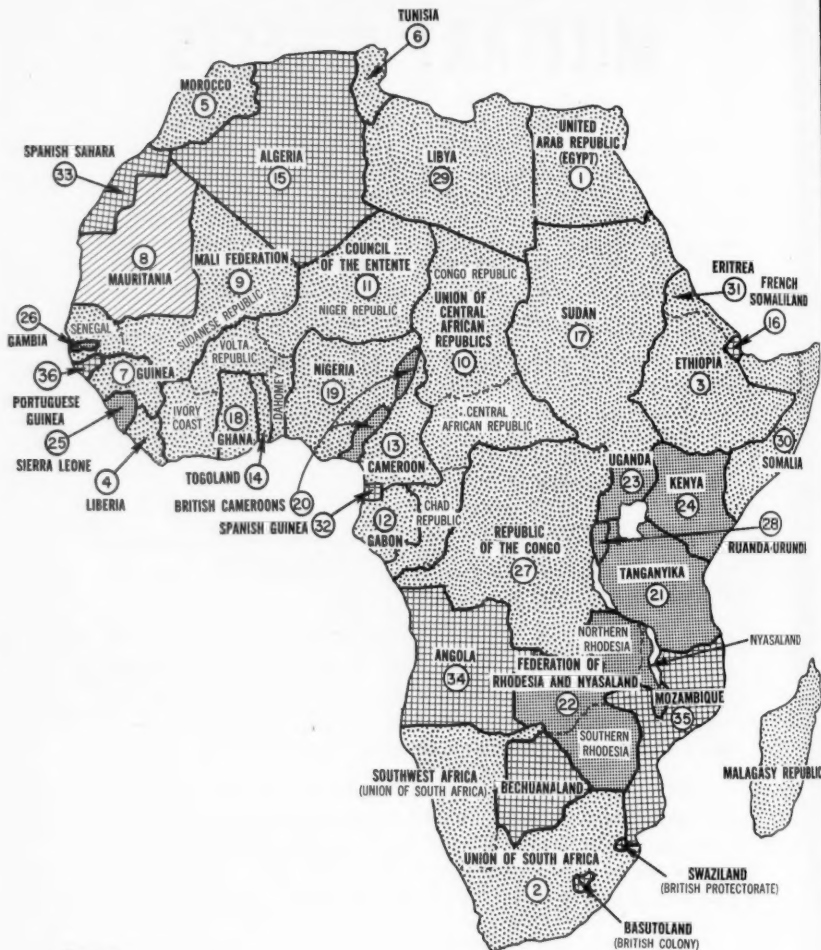
• **TOO IMPORTANT.** . . to be comprehensively discussed in a few pages, Africa, nevertheless, demands the attention of strategic planners.





Current unrest, the emergence of new nations, and the surge of violent nationalism in countries where political maturity is questioned focus attention on this area. The military significance of Africa is intimately interwoven with her culture, resources, and political fragmentation.

Presented in the digests which follow are but a few of the strategic factors which become evident as this great continent emerges into the limelight of world affairs. Opinions expressed in these articles are not necessarily endorsed by the U. S. Army Command and General Staff College.—Editor.

POLITICAL EVOLUTION IN AFRICA SINCE 1950

NUMBERS ON MAP REFER TO LEGEND AT RIGHT



-  **INDEPENDENT**
-  **INDEPENDENCE SCHEDULED**
-  **SELF-RULE BEING NEGOTIATED**
-  **OTHER AREAS UNDER EUROPEAN RULE**

THE DELINEATION OF INTER
NATIONAL BOUNDARIES ON
THIS MAP MUST NOT BE CON-
SIDERED AUTHORITY

LEGEND

A decade ago there were only four independent states on the continent. These were:

1. UNITED ARAB REPUBLIC (EGYPT)
2. UNION OF SOUTH AFRICA
3. ETHIOPIA
4. LIBERIA

Formerly under British rule.

Occupied briefly by Italy prior to World War II.

The only state in Africa which has never been under European rule.

The French colonial empire in Africa is in dissolution. The 1958 constitution of the Fifth Republic established the French Community in place of the French Union. Each overseas territory was given six months to choose whether to retain its status, to become an overseas department closely integrated with the Republic, or to become an autonomous state within the Community. By the end of 1960, only Algeria and the French Somaliland will remain in close political affiliation with the French Republic. The status of each of the former French possessions is as follows:

5. MOROCCO
6. TUNISIA
7. GUINEA
8. MAURITANIA

Independent monarchy since 1956; includes former Spanish Morocco. Republic since 1957.

Withdrew from the French Community in 1958. Independent Republic. Independence to be proclaimed 28 November 1960.

9. MALI FEDERATION
- SENEGAL
- SUDANESE REPUBLIC

The Mali Federation created 17 January 1959 split apart on 20 August 1960.

10. UNION OF CENTRAL AFRICAN REPUBLICS
- CHAD REPUBLIC
- CONGO REPUBLIC
- CENTRAL AFRICAN REPUBLIC

Independent within the French Community.

11. COUNCIL OF THE ENTENTE
- IVORY COAST
- DAHOMY REPUBLIC
- NIGER REPUBLIC
- VOLTA REPUBLIC

12. GABON

13. CAMEROON
14. TOGOLAND

Released as United Nations trust territories by France in 1960.

15. ALGERIA
16. FRENCH SOMALILAND

Remains an Overseas Department of the French Republic.

Remains an Overseas Territory of the French Republic.

British colonial holdings in Africa are rapidly gaining sovereignty within the Commonwealth. The status of each is:

17. SUDAN
18. GHANA
19. NIGERIA
20. BRITISH CAMEROONS
21. TANGANYIKA

Released from British and Egyptian joint rule in 1956.

Granted independence from Great Britain in 1957.

Independence from Great Britain scheduled for October 1960.

Independence being negotiated. May join Nigeria.

A United Nations trust territory of Great Britain; gained self-government in September and may become independent within a few years.

22. FEDERATION OF RHODESIA AND NYASALAND
- NORTHERN RHODESIA
- SOUTHERN RHODESIA
- NYASALAND

Self-government in one form or another is under negotiation with the British or is in prospect.

23. UGANDA
24. KENYA
25. SIERRA LEONE
26. GAMBIA

The events of the past few months have seen violent change in Belgium's holdings in Africa. As of publication of this issue the status of Belgian holdings in Africa is in a state of flux.

27. REPUBLIC OF THE CONGO
28. RUANDA-URUNDI

Belgium pulled out of the Congo in June, the resulting chaos brought Belgian and United Nations intervention and internal conflict.

A United Nations protectorate of Belgium. Ultimate independence has been promised.

Italian possessions:

29. LIBYA
30. SOMALIA
31. ERITREA

Became independent monarchy in 1962.

Independent republic, July 1960; includes former British Somaliland.

Federated to Ethiopia in 1962.

Spanish possessions:

32. SPANISH GUINEA
33. SPANISH SAHARA

Colonies.

Portugal is the only European nation which has retained all of her African holdings.

34. ANGOLA
35. MOZAMBIQUE
36. PORTUGUESE GUINEA

Overseas provinces of Portugal.

The Military Side of the African Problems

Translated and digested from an article by General J.-M. Nemo in *REVUE MILITAIRE GENERALE* (France) October and December 1959, and January 1960.

TO THE multitude of international problems are now added those created by the continent of Africa. The military aspects of Africa are so new that the most that can be done here is to offer a rough outline of them.

From the 15th to the 19th century—except for the extreme northern strip of the continent—Africa took no part in world affairs. Beginning with the 19th century, the European peoples launched a methodical assault upon that vast continent. The objectives in Africa were to establish an additional source of national prestige and power, of material wealth and human resources. As yet she had no value other than as a side issue to the stakes in Europe. Even during the two World Wars of the first half of the 20th century, Africa's northern part was limited to the role of a distant rear base. Aboriginal Africa remained practically out of the conflict.

The regional boundaries delineated upon the modern map of Africa are due entirely to the arbitrary division of the area among the European powers in the 19th century. Within those recently drawn boundaries young nationalisms are coming into being and are expressing themselves in languages foreign to Africa herself: mostly French and English. Africa is approaching independence on the basis of the European sliceup. Some of the native African leaders dream of a return to old racial groups and units, but Africa has lost contact with her past. The last century has been more important for the continent than all those which preceded it. There is nothing left of the ancient African empires, and it is only under conditions of peace that a real African commonwealth could come into being.

Africa is coming on stage when the scene and the backdrop are being changed, when the world is in the midst of a great scientific and technical movement. For Africa's new states and countries, the only fruitful unions will be those which they will establish with their colonizers. Africa joins civilization in the nuclear age. This is not an evolution for her, it is a mutation. One must be very careful in answering the question: "What will the near future have in store for Africa?" One thing is certain: she cannot remain neutral, for the world will not wait for Africa's evolution, or transformation, and the world has need of the African resources.

Material Resources

Africa has reserves in petroleum which are currently receiving much attention. She has considerable bauxite which industrialists of all countries covet, as they already fear having exhausted the European and American deposits. She has reserves of those metals usually called strategic but which might better be called vital, since this would be closer to the truth. She is rich in hydraulic power resources only waiting to be harnessed.

Africa's material potential is so evident that it draws attention away from her human and spiritual resources. In a world deemed by some to be already overpopulated, the likely expansion of the African population might be considered undesirable. But this is beside the point: the population is there, it increases, and it develops needs that will have to be satisfied. Until now, with the exception of the Mediterranean coastal areas, the African world has not made notable contributions to the spiritual wealth of humanity. But this may not always be so. It is probable

that som
in civiliz
Times
world ca
like a c
serious
given to
voice, b
form, a
Afric
needs A

Lufir:

tion
woul
worl
it is
Th
of
stan
tipli
B
cour
to e

that some day Africa will take her place in civilization.

Times are past when the rest of the world can disregard Africa and treat her like a child who is too young to follow a serious conversation. A place must be given to Africa and she must be given a voice, but not without trying to influence, form, and prepare her for her role.

Africa needs the world and the world needs Africa. This is the essential condi-

more advanced countries who are able to give them support. Without this help they will not be able to extricate themselves from past lethargy and archaic traditions.

However, this excludes the dream of an objective, though sympathetic, neutrality toward the great powers of the world—a dream that is understandable but unrealistic.

The young African states could hope to retain a balance between the Western



Belgian Government Information Center

Lufira Falls in the Katanga district of the Congo. Africa is rich in unharnessed hydraulic power resources.

tion of any bargain or contract. This would be a simple proposition if the world were united. Everyone knows that it is not.

The many African states have been born of recent, almost fortuitous circumstances. This fragmentation favors a multiplicity of contracts.

Being as much the courtiers as the courted, the African states will be able to evolve only by establishing ties with

World and the Communist world, only by taking from each that which they can absorb. But a customer is free to choose among tradesmen only if his vital requirements do not depend on the merchandise that is offered him.

A minimum of power is necessary to be neutral. The African states do not have this required minimum of power. To be sure, they are free to choose—but they are not free *not* to choose.

In the struggle that pits them against each other, the East and the West are at grips in Europe and Asia, indeed, everywhere. The Iron Curtain does not admit a "no man's land."

Africa resembles a maneuver area, a wide-open space between two worlds aligned against each other. This does not mean that modern technology must immediately be applied. Africa is still a land where it is possible to wager, and where it is still admissible to lose.

Strategic Relationships

The idea that Africa is a natural complement of Europe is not new. It has developed and become more concrete through the colonial period. The experience of World War II has shown the value of Africa as a base for operations in Europe. Europeans easily visualize Africa in roles that she has already played. The Soviet Union has immense Siberia, which lends her a practically limitless capacity for resistance, and upon great occasions in history she has been helped by General Winter. Why, then, should Europe not have vast Africa and be helped by General Sun?

This concept is probably correct, but it is too closely linked to a purely European strategy. It is an extrapolation of facts of the last conflict rather than a complete analysis of those of a future conflict. In this sense the concept would appear to be inadequate and should be integrated into one that is more complete.

If Africa is a rear area for Europe, it is also a protective zone for the two Americas.

The Americas, and particularly the United States, cannot permit a hostile power at Dakar or Casablanca. Intercontinental missiles from these areas would threaten the greater part of the American Continent. The Americas cannot allow one of the Atlantic shores to fall into the hands of their opponents.

Should war break out between the two

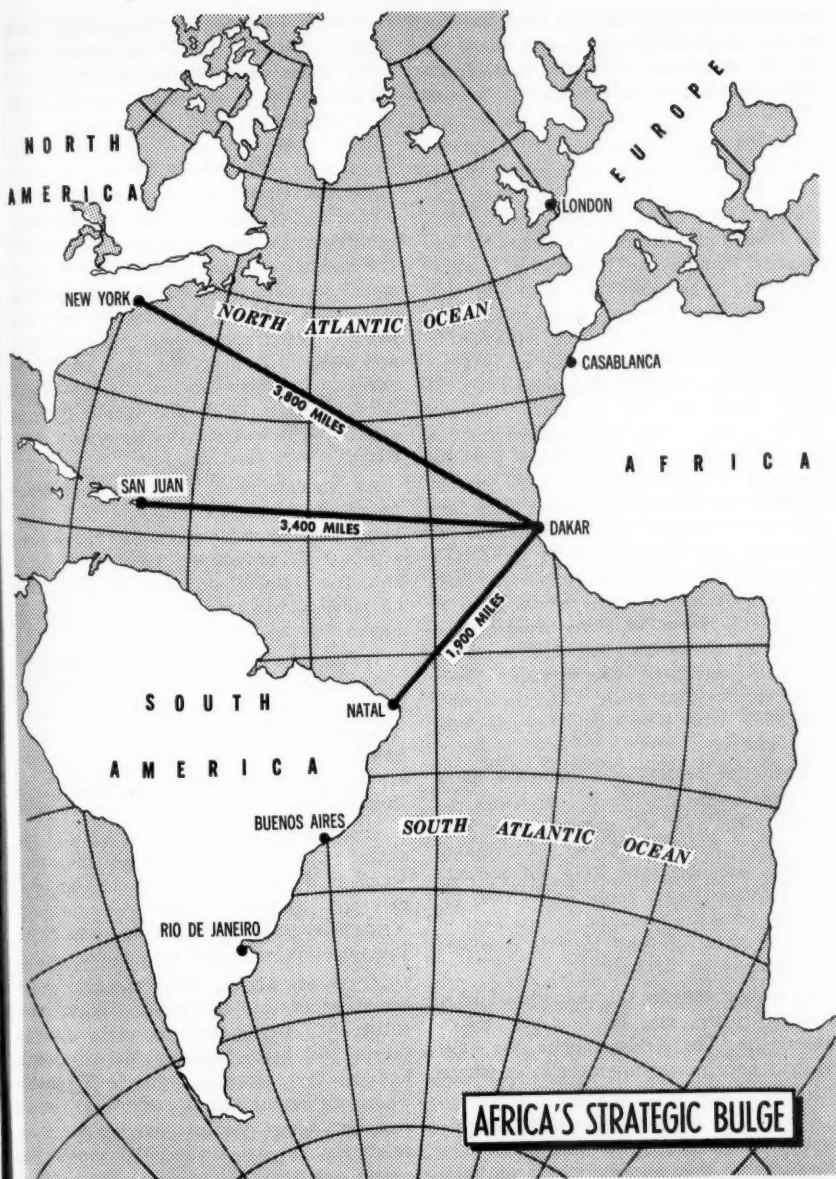
great blocs, its principal battleground would probably be the Atlantic. There can be no domination of the Atlantic Ocean without freedom of movement in Africa. This was demonstrated by the experience of the Germans in 1940-44. In the era of the intercontinental missile and the nuclear submarine, it would seem that this requirement would become even more imperative.

If the Communists held Africa, they would turn Europe's southern flank. This would make European resistance precarious. Even if Europe should still resist, all navigation across the Atlantic would be subject to simultaneous attacks from the north and the south as well as from the air and would be dangerously threatened if not neutralized within a very short time. It is a short route from Africa to South America; the ocean barrier of old is now no more than a passageway.

In this broad outline of strategy, it is easy to see that the most important part of Africa is the Tangier-Tunis-Douala-Dakar quadrangle, that is the northern and western part of the continent which juts out toward America. This area is a bastion in the middle of the Atlantic battlefield. In any strategic plan, it will be a major objective.

Fragmentation and External Influence

However, divided Africa may well be contested in ways different from the past. Her fragmented condition invites progressive conquest by apparently peaceful means. Her complex institutions seek to reconcile the eagerly desired independence with the inescapable need for dependence. These institutional weaknesses offer abundant openings for subversive infiltration. In country after country, in spite of legally established boundary lines, old ties between people of the same race or religion facilitate clandestine propaganda and the spreading of subversive influence. Economic changes, the transformation of a way of life, and the emergence of a



working class in a society that has for so long been almost exclusively rural are all circumstances that offer untold opportunities for specialists in revolutionary action.

On the other hand, the very fragmentation of Africa may be a source of resistance to penetration by Communist propaganda. China's sudden toppling into the Communist camps, for instance, was possible because the Nationalist government had centralized the state. In this situation Mao Tse-tung could either lose everything or gain all. The situation in Africa will be very different as long as fragmentation exists. The unification of great parts of the African Continent would present a two-edged sword for the East as well as for the West. For the Africans it would doubtless mark the beginning of unbelievably difficult times and internal rivalries. The development of Africa in her entirety would be a task exceeding the means of either the East or the West and a choice would have to be made in favor of some areas to the detriment of others. Another partition would be necessary, which would divide those regions that would be given assistance from those who would have to wait for better days.

Under the present circumstances, nothing justifies the prediction that either the East or the West will necessarily be successful in Africa. On the other hand, nothing indicates that it is not possible that both may, as a result of political interplay, economic pressure, agitations, and social changes, alternate in their successes and reverses on African soil.

Appealing though this hypothesis of a peaceful rivalry may be, it is unlikely to materialize. The African prize has only recently been placed upon the table where the fate of the world is being decided.

Should the Eastern bloc score significant progress in Africa and should the West realize that she represents an area

that must be defended, there might well result a war—a war of an entirely new kind, under very difficult social and economic conditions and amid an entanglement of issues.

Military Factors

To arrive at a mode of operations for a war in Africa, that would conform to conditions existing there and still permit the use of the most up-to-date means, it would be necessary to bring together specialists in strategy and tactics with experts on geography, sociology, economics, and African history. As was mentioned earlier, other than the operations in North Africa during the Second World War, no experience in warfare can serve as a precedent in this case.

An inventory of the lessons learned from all military operations that have taken place in Africa remains to be compiled. And, of course, its transposition onto the scale of a global war in terms of modern means has not been accomplished.

Within the limits of this article it is not possible to compile such a record. We will, therefore, confine ourselves to pointing out that which seems to be essential and that which will necessitate the use of methods and procedures differing from those usually learned in military schools.

Strategically speaking it is Africa's insular as well as continental character which is doubtless the most striking and determining aspect. The two adjectives seem to contradict each other and their juxtaposition calls for an explanation.

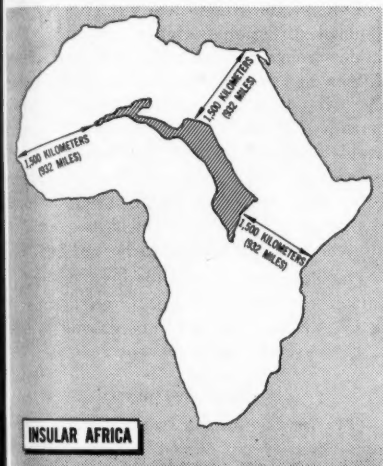
Of course, Africa is a continent; to be convinced of this one needs only to consult a map and to read the most elementary school book. Roughly, the continent has the form of an ill-shaped T-square whose horizontal part is particularly massive and whose vertical portion becomes relatively narrow toward the south. Its coasts are curved inward.

Access From the Sea

The domains of the sea are clearly separated from the land.

However, if one draws a line parallel to the coast, about 1,500 kilometers inland, there remains only a very small portion of land of Africa. The same experiment on a map of North America produces quite another result and the difference is even more noteworthy when it is tried with a map of Eurasia.

Practically no point of the African Continent is more than two hours removed



from the coast for an aircraft flying at 500 miles per hour.

This statement of fact, so easily made, may not necessarily produce the strategic reflections that it merits. And it deserves such attention to an even greater degree if intermediate range missiles rather than aircraft are considered.

Africa is surrounded by seas. She has always been reached from the sea. It is still by sea that she receives and exports most of her merchandise. If ships should cease to stop in her harbors, Africa would suffocate, modern air transport notwithstanding. Wherever one may be in Af-

rica, there is nothing that would give even a semblance of civilization to life that has not come across the ocean; what aviation has done is to speed the goods from harbor to user.

Internal Communications

The ship and the plane, the harbor and the airfield are the wherewithal of modern Africa. Because of them Africa takes an increasing part in international life. They are also the wherewithal of Africa's strategy.

There is practically nothing else, for the most outstanding characteristic of Africa—other than those just mentioned—is the paucity of her system of land communications.

Other than a few better developed regions in the extreme north and the extreme south, the highways are as deceiving on the ground as they are beautiful on the map. They start at the harbor exits like beautiful promises: macadamized and broad. After a few dozen miles of high-speed travel their condition changes quickly. Ruts and obstacles multiply; bridges are replaced by ferryboats, and these by fordings which are subject to a weather which is no more agreeable in the strong heat than under the torrential rains. Road capacity under the most favorable conditions amounts to no more than a few hundred cars per day, equal to one hour on a European or American highway. During the inclement weather season the roads are practically unusable. Over any considerable distance all travel becomes a sporting proposition. Transport must be strictly limited. In case of military operations, every highway would require incessant repair and careful use, at high cost in personnel and materiel.

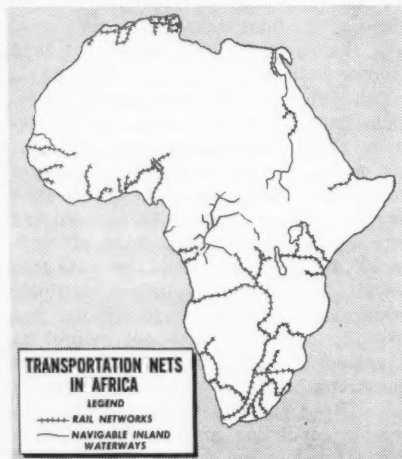
Railroads are few in number and networks exist only in the extreme north and south of the continent. From a military standpoint they by no means constitute a network adaptable to strategic movement. Nor do the navigable rivers

—most of them usable during a part of the year only—provide an alternative.

Thus, aircraft are the only dependable means of transportation in Africa. Of course, they are limited by atmospheric conditions, and can be used only over the normal routes where the necessary facilities are developed—essentially the populated regions and the areas of existing economic activity.

Regional Contrasts

Africa divides naturally into roughly paralleled east-west strips of alternating



desert, grassy plain, and jungle. Between these very different regions, most of the internal trade and commercial activity takes place. This natural and economic system, therefore, takes the form of a kind of loosely woven net of human activity which, in fact, has a certain amount of strategic value.

This checkerboard pattern is valuable to the strategy of our time and it will doubtless remain valuable in the strategy of tomorrow. It represents a synthesis of permanent facts relating to the currents of natural circulation, and to the possibil-

ities of economic development. Air travel has revived these trade routes.

There are several distinguishable north-south routes: Tangier-Dakar, and extending over the Atlantic toward South America; Algiers-Kano-Douala-Pointe Noire-Luanda-Capetown; Tripoli-Fort-Lamy-Brazzaville-Salisbury-Durban; and Cairo-Nairobi-Tananarive.

The east-west routes are: Rabat-Algiers-Tunis-Cairo; Dakar-Abidjan-Lagos-Douala-Bangui-Entebbe-Nairobi; and Léopoldville-Salisbury-Tananarive.

The specific routes are variable but the general directions remain constant. This spider web which we have just woven over Africa has the inconvenience of fostering the belief that this vast continent is homogeneous. Africa is highly diversified and deeply compartmented. Surface, climate, vegetation, not to mention people, give to every segment of Africa an individual character all its own, which has a direct influence on the tactics to be applied.

The differences may seem to be only a matter of details. But it is on details of this kind that the final success or failure of the best strategic concept rest.

Space Factors

This fragmentation is even more striking when it is placed in the African vastness. In Western Europe we think of distances in hundreds of kilometers. To calculate on the African scale, we must measure in thousands of kilometers. This is more than a change in scale. In reality, it is a question of a complete change in thinking, reasoning, and method.

This is particularly true as far as ground forces are concerned. An infantryman in Africa must think like an airman in the consideration of distances and directions, but, in operating in clearly separated and defined regional compartments he must not be allowed to lose his traditional habits. Furthermore, he must acquire a particular mentality that is

ir travel

e north-
extending
America;
Luanda-
Cazaville-
bi-Tana-

-Algiers-
-Douala-
poldville-

e but the
ant. This
oven over
fostering
is homo-
nified and
climate,
e, give to
individual
a direct
plied.

be only a
details of
or failure
t.

more strik-
e African
e think of
meters. To
we must
eters. This
In reality,
change in
d.

as far as
An infan-
like an air-
stances and
in clearly
l compar-
to lose his
e, he must
ty that is

adapted to the environment in which he finds himself.

The boldness of concepts must be tempered with a realization of the facts. This can be learned only by studying the behavior of those who have conducted operations in Africa in the past.

Distances cause delays even when displacements are executed by aircraft. To



Belgian Government
Information Center

Rain forests in Central Africa

base timetables on those of commercial airlines would be misleading. A military movement across Africa by air may take several days rather than several hours. Such a movement requires that facilities be available, that the fuel supply is in place, and that necessary repairs can be effected, which all require preparation.

Climatic variations on the immense African Continent are numerous. Any generalization about the climate of a par-

ticular region should be suspect. The seasonal variations are extreme. The rainy seasons hinder movement and make maneuver on the ground extremely difficult.

The rigors of the climate, although real, are not insurmountable. It is the ability of military forces to take quick advantage of breaks in climatic conditions that becomes important.

Human Factors

War is no longer waged on open terrain. The physical surroundings are no longer the only conditions that must be considered. Human surroundings also impose limitations on military operations. In Africa, the current state of agitation, the ideas that disquiet the continent, the rapid transformation that it is undergoing, the perspectives that its evolution offers, its metamorphosis or its eventual mutation must all be considered.

There certainly exists an African environment that differs from other human surroundings. But this environment is composed of a number of factors among which the differences and the contrasts are strongly marked. Unity and diversity exist side by side. However, one human factor, which is difficult to estimate, must be taken into account—the emotional factor. The population is impressionable, susceptible to mass movements, and prone to join collective demonstrations where individuality can be submerged.

One might be led to believe that the influx of modern ideas into Africa will soon cause the old divisions between peoples and races to disappear. This is perhaps true from a purely historical point of view: it is possible that, under the pressure of ideas and technology, African uniformity may be attained in a few decades.

But it is not this scientific and abstract viewpoint that is of interest to the military planner or the statesman of the day. For, in simple fact, the rivalries between tribes and races exist and have become

even more danger-laden during this period of transition from colonial to local authority. And one must recognize that they will reappear wherever government is temporarily enfeebled and power rests in uncertain hands.

In new countries, the margin between authority and dictatorship is always a slim one. Ambitious elements will always be tempted to cross that line while lead-

Military operations must, therefore, be based on an accurate appraisal of the psychological atmosphere.

Other human factors also need to be studied more deeply than they have been. Little is known of African demography, her developments, and migrations. Military planning is influenced by population distribution.

The number of young people attending



Belgian Government Information Center

Lush grasslands of the African plateaus

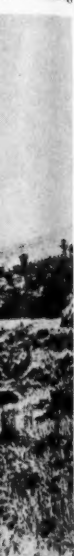
ers of good intention will find it difficult to respect it without losing power.

A remarkable thing about the Africans is that politics has come to affect every aspect of their lives. A political party always reflects ethnic and religious influences, whatever the modern name it may be given. In the face of adversity the African takes refuge in a spiritual life which, however crude, dominates him entirely. That is why his reactions are unpredictable for Europeans. Psychological factors are of prime importance in Africa.

schools is small. Even fewer attend the more advanced schools. Although the degree of education varies in the different states, it can be said that primary instruction is given to about half the children and secondary instruction to about 10 percent. Advanced studies are available only to a privileged few.

This, however, is a temporary situation. Education is making rapid progress in Africa. But an appreciable time will elapse before sufficient young people can be trained to meet local requirements.

efore, be
al of the
eed to be
ave been.
nography,
ons. Mili-
population
attending



tion Center

attend the
gh the de-
e different
primary in-
t the chil-
o about 10
available

situation.
progress in
will elapse
e can be
nts.

What is the place of the woman in African society? This problem might seem to be far removed from our military considerations. Nevertheless, no modern society can claim stability if the woman has no standing. She must be a partner rather than a servant. In the Western countries women have a voice and take an active part in the political and social life of their nations. In Africa, evolution cannot go forward without improving the woman's status in the community.

It is important to indicate here in rough outline how the physical and human environment would condition military operations that might take place in Africa.

Africa can, of course, give support to some of the methods used in global strategy. Airbases and launching sites can be built; forces can be stationed there and rotated to support the battle in other regions of the world. There is nothing specifically African in this. But there is a strategy peculiar to Africa and there are special tactics which alone are adapted to the physical and the human characteristics of the continent. It is of this strategy and of these tactics that we want to speak now.

Strategy and Tactics for Africa

The two basic considerations in an African strategy are the organization of a system of transportation facilities and, second, the cooperation of the population. The West is more concerned with the first; the Communists with the second. And yet the two are interdependent and mutually necessary. Secure material logistics facilities cannot be set up without a sympathetic attitude on the part of the population. In Africa there can be only a single

strategy in which the civil and military sectors are combined and inseparable.

This strategy must not, however, be too inflexible or too rigidly planned. In the psychological field, it is necessary to understand the natives: to know the African soul. In the material field, only light installations should be constructed.

Every strategic maneuver in Africa is influenced by the terrain and requires careful calculations and planning.

Tactical considerations must be based upon the use of forces of small numerical strength. Only small forces are required or usable even for missions of great scope and importance. These forces will, therefore, be of the most select type. Tactics will vary greatly being adapted to the compartmented character of the continent. Local actions will have to be fitted into the over-all tactical picture by the higher commanders who will function as coordinators and will control allocations of men, equipment, and supplies.

Tactical decisions at operational level will be based not only on the nature and strength of the enemy forces but also to a large extent on the human environment. In other words, racial and religious relations and the hereditary bonds of African vassalage cannot be ignored.

Field operations of this nature must be performed by specialized territorial units who know the country. Their weapons and equipment must be of a special design and suitable for Africa.

In order to keep Africa on our side the West must apply a definite and coherent policy which will bring the Africans themselves to integrate their continent with the West.

This is an age of change—tumultuous change. Nothing has been more affected by technological advance than has military power.

Admiral Arleigh Burke

PROPOSED:

A South Atlantic Treaty Organization

Translated and digested from an article by Colonel L. Dullin in
REVUE MILITAIRE GENERALE (France) November 1959.

THE North Atlantic Treaty Organization (NATO) was created for the purpose of protecting Western Europe and North America. It has fulfilled its role to perfection. The Soviets have not been able to advance on any of its area, from the North Cape to the Mediterranean Sea. The Iron Curtain has remained in its 1949 position. While we live in a "peculiar sort of peace," at least the situation has not degenerated into an open conflict. We must recognize that this represents a test of solidarity, regardless of the comments of those who would belittle the treaty. By her violent attacks against the Atlantic Alliance, the Soviet Union has shown that she considers it effective.

Behind NATO's shield Western Europe was able to dress the wounds of the last war, and to make significant technological progress. The idea of European cooperation was launched and economic organizations created which are beginning to prove their worth. Even more important is the fact that Soviet communism has been unable to shake the firm determination of the Western Europeans to defend their principles and their civilization. Two interesting facts should be pointed out: there has been a reduction of Communist strength in the Western countries and the efforts of a neutralist element to assert itself in Europe have failed.

It can safely be said that today we are progressively on the path to a degree of equilibrium in matters pertaining to nuclear armament. In the sphere of tactical airpower, the Soviets retain an advantage which permits them to face NATO with adequate force while retaining a capabil-

ity of striking elsewhere. This is a grave problem to the Free World, for there is still the African Continent—actually an extension of Europe. The loss of Africa would be a catastrophe for the West.

Africa's Exposed Flank

During the past few years, the situation in Africa has undergone a profound change. The protection afforded by the Middle East against outside influences for all practical purposes no longer exists. Internally, communism has feelers into the very heart of the continent. How much of an effect will they have? The only answer to this is: "As much as we will permit them to have."

The Middle East has always been a sensitive spot on the map of the world. The situation has not improved since World War II. The defense system, organized by the West and known under the name of the Baghdad Pact (now the Central Treaty Organization or CENTO), is in danger of being broken by Communist subversion on one hand and by Arab nationalism—personified by the Arab League and Egypt—on the other.

In spite of all the efforts in that direction, the several Arab States are unlikely to attain true unity. The creation of the United Arab Republic which groups Egypt and Syria together will not help the problem. The situation in Iraq seems to be more serious, especially since the revolution there in July of 1958. The over-all situation remains troubled, precarious, and disquieting.

The Baghdad Pact has lost its Iraqi adherent. More than ever before, the *status quo* is maintained only by virtue

of the presence of the American 6th Fleet in the Mediterranean.

In these circumstances, the least that can be said is that the Middle East plays less and less the role of a protective shield for the African Continent.

A Continent in Transition

Last, and still speaking about the external affairs of Africa, the ambiguous position that has been adopted by Colonel Nasser has enabled Soviet diplomacy to chalk up points by solidly entrenching itself in Cairo and by furnishing seemingly unselfish assistance to the Arab countries. This has permitted the Soviets to infiltrate technicians on the southern shores of the Mediterranean. Politically and economically, Soviet Russia has established footholds in the Middle East, Egypt, and Libya. These areas constitute ideal bases from which to carry on agitation in the heart of the African Continent.

The recent political changes in Africa—the independence of Tunisia, Morocco, Ghana, Guinea, and others—have enabled the USSR to enter directly into the African scene. The violently anti-European attitude adopted by Ghana and Guinea and the Marxist antecedents of their leaders are matters of serious concern. "The worm is in the fruit" and is eager and ready to pursue its work of undermining and destruction. The acceptance of arms from Czechoslovakia by Guinea illustrates this determination.

Common Defense Needed

No common plan exists that would tie Europe, protected by NATO, to exposed Africa. Of course, the Western Nations who are preponderant in Africa, namely France and Great Britain, have organized a nucleus of African defense measures. But in spite of friendly relations and a certain degree of cooperation, there is no over-all defense plan. South Africa and the Belgian and Portuguese possessions do not participate in these plans.

A unified defense is essential. In the face of Communist infringements in Tibet and Iraq, we must direct our attention toward the African Continent. As General de Gaulle has said: "Soviet penetration in the Middle East is far more important and dangerous than the Berlin affair."

NATO cannot intervene south of the Mediterranean. How, then, can a defensive alignment be organized on the African Continent, a coordinated defense that will be effective from the Cape of Good Hope to the existing defenses in Western Europe?

It would be futile to depend on the use of the Suez Canal in the event of a conflict. Its vulnerability to aerial attacks or sabotage is obvious. Only the route of the Cape of Good Hope can be used to reach the Indian Ocean and some of the African outposts there.

NATO needs the installations at Dakar for support of its naval operations. If Western Europe constitutes the outposts of the North American defense line, then it can be said that Africa plays the same role with respect to Central and South America.

It is unthinkable that we could act in disunity when the southern flank of "Fortress Europe" is exposed. The Soviet military potential is sufficient to enable it to operate with large forces in the direction of the Middle East and the African Continent while neutralizing the European NATO forces by strong threats against their area. This danger cannot be overlooked.

Strategic Extension of Europe

A number of reasons thus point to the need to reconsider the defense of Africa, both in her relation to the European theater of war and her own defensive strategy.

Acting as a natural extension in the south of the European Continent, Africa affords NATO the depth that it otherwise lacks. Nantes is only 1,000 kilometers from Leipzig.

Intermediate range ballistic missile (IRBM) launching sites in the Leipzig region, having a range of 2,500 kilometers, could cover all of France, the Iberian Peninsula, and North Africa from Casablanca to El Alamein. These same missiles installed in Albania could cover France,

of launching sites for missiles that are capable of reaching the southern USSR and the Danube area of Europe.

Finally, the northern part of the African Continent can provide air support facilities and naval bases.

In short, Africa is indispensable to



*Revue Historique de L'Armée,
Ministère de la Guerre, France*

The vast Sahara provides needed depth to the European theater

the Iberian Peninsula, Marrakech in Morocco, Fort Laperrine, and the entire Tibesti Mountains. Thus, in either case the oil fields of the Sahara are within reach. But the African territories south of the 20th parallel can be reached only by IRBM's having a range of 3,000 kilometers or by intercontinental missiles.

Due to its topography and vastness, the Sahara north of the 20th parallel offers excellent possibilities for the installation

NATO's strategic plans for European defense.

Strong Points for Defense

The political map of Africa discloses three very important considerations to the defense of Africa.

The first is the presence of a "weak zone" in the northeastern part of the continent, consisting of Arab States which are linked with the Arab League and to the Afro-Asian neutralist bloc. Egypt,

the Sudan, Libya, and Tunisia are all countries where Soviet infiltration exists.

The second is the great extent of the French Community which stretches from Algiers on the Mediterranean Sea to Brazzaville in the Congo and has a depth of 4,700 kilometers in the northern half of the continent.

The third deals with the fragmentation of the southern part of the continent,



Belgian Government
Information Center

African terrain impedes movement

which is divided by Belgian and Portuguese possessions and British dominions or possessions.

If we now look at a physical map, we are struck by the vastness of the Sahara, by the great tropical and equatorial strip in which great rivers and luxurious vegetation dominate, and by the existence of two temperate strips, north and south,

which are of minor importance. Finally, east of the continent there is the island of Madagascar.

Mountains and other topographic features restrict movement between the sub-areas of the continent. North Africa and the Sahara Desert have many natural obstacles as has east Africa with her difficult regions of Ethiopia and Kenya. In general, it can be said that Africa is far from favorable to movement.

Distances also play their part: 2,700 kilometers separate Cairo from Fort-Lamy. The lack of good roads makes the distance even more of an obstacle.

Thus, a first conclusion can be arrived at from this panoramic and physical view: the African Continent certainly offers more advantages to the defense than it does to the attack. Second, conditions in the western part of the continent are more favorable for offensive operations than those in the east.

The Line to Hold

Economically the real wealth, exploitable and exploited, is to the west of the Bône-Fort-Lamy-Nairobi axis. Oil, iron, copper, magnesium, bauxite, coal, gas, and agricultural potential contribute to the great wealth of that region. The attraction of these riches has resulted in most of the communications systems in the northern half of the continent running north-south rather than east-west.

For different reasons, namely political fragmentation, the southern half of the continent also has not seen much construction of communications from east to west.

From this general view one may deduce that the line Bône-Fort-Lamy-Brazzaville-Nairobi is the key to any defense against aggression from the northeast. This is the line that must be held if the entire continent is not to succumb to enemy penetration.

There can be no doubt that Africa is seriously threatened. There are sizable

Soviet missions in Iraq, Syria, Egypt, Libya, and the Sudan. The evolution of the young and independent states of Tunisia, Morocco, Guinea, and Ghana cause misgivings. The masses are an easy prey to organized subversion. Struggles are taking place in countries like Morocco between the royal power and the will of the people as represented by subversive organizations. The Guinea leader is imbued with Marxist doctrine and has accepted armament from a Soviet satellite.

Moscow has not concealed its goal. In the course of the various congresses of the Communist Party, it has been reiterated many times that the Soviets will support the attainment of independence by the various nations. The Kremlin leaders favor a "Balkanization" of Africa as an excellent way to undermine the Western position.

In this struggle it is right and proper that all the states having a stake in Africa should work together. Since it is the Soviet aim to dispute European presence in Africa, it is time that a common effort be made to raise the living standard of the African world.

In the present state of Soviet armament the most serious threat is an attempt to reach Africa via the Middle East and Egypt. From there the advance can continue westward to overrun the Sahara in a southeasterly direction for the purpose of reaching Fort-Lamy and from there the coast of Nigeria.

This main threat can be supported by either amphibious or airborne operations, launched from Albania or Bulgaria and aimed at Tunisia in particular.

An attack might also come from the Arabian peninsula across the Red Sea to reach Fort-Lamy.

Considering the wealth that lies west of the Bône-Fort-Lamy-Brazzaville-Nairobi line, it is obvious that any gap in that position must be considered dangerous to the security of the entire African Continent. Thus, the Fort-Lamy position

is crucial for Africa from the Bight of Benin to the Congo Basin.

The tactical value of the Fort-Lamy-Lagos-Douala complex should be especially noted. The distance between points in this triangle amounts to a maximum of 1,500 kilometers. Lagos and Kano are connected by both a railroad line and a good highway. Kano itself is only 900 kilometers from Fort-Lamy. A good highway leads from Douala to Fort-Lamy. The harbor installations of Lagos and Douala are adequate. The establishing of an industrial complex at Edéa [east of Douala] further heightens the value of the "operational triangle." In this area the necessary elements can be brought together for the organization of a complete ground, air, and naval base. Its outpost would be Fort-Lamy and its rear area would be Lagos and Douala. This base would provide the theater of operations with a center capable of receiving reinforcement and logistic support from outside.

The threat against and the value of the area that must be protected justifies the creation of a theater of operations that would have the support of what formerly was French West Africa, the British possessions, in particular Nigeria, and French Equatorial Africa.

In practice, a valid defense can only be organized by political measures that draw the different states together. In Africa, these are the French Community, the British Commonwealth,* Belgium, Portugal, Ethiopia, and the South African Union. All but the last two already belong to NATO. This situation would facilitate the establishment of a treaty that would provide an organized defense of Africa.

A Possible Organization

A collective defense organization is indispensable because ultimately it is the only means by which the enemy can be

* This article was written prior to the recent granting of independence to the Belgian Congo and the events which have ensued.

induced to renounce his aspirations. At the present time there exist only the small beginnings of a defense organization. There is practically no solidarity at all between North, Central, and South Africa. The danger that threatens the African Continent must be recognized by all the states.

In the political sphere unification is difficult to envisage. In the economic and social sphere, economic growth must be assisted and the living standard for the local populations must be improved.

Briefly then, the African defense and its organization must be coordinated and duly ratified by treaty.

There is, of course, the possible solution of extending the jurisdiction of the North Atlantic Treaty over all of the African Continent. However, the inconveniences of such a step seem to be many. To begin with, a certain number of the members are not directly concerned in the African questions other than in the very general sense of an over-all defense of the Free World.

Another difficulty would be the need to create additional organs subordinate to NATO. Already the North Atlantic Council and its military committee have four major subordinate organs: the Supreme Allied Command Europe, the Supreme Allied Command Atlantic, the Canada-United States Regional Planning Group, and the Channel Committee. To include Africa in that organization would mean to augment the number of subordinate organs to six or seven which would make effective coordination most difficult.

Also, the political and economic measures in effect for the highly developed countries of the Atlantic Alliance are not adapted nor suitable for the underdeveloped countries of Africa.

Legally, the North Atlantic Treaty would have to be modified so as to provide for the inclusion of all the states of the French Community, those of the British Empire, the Belgian and Portu-

guese possessions, Ethiopia, the Union of South Africa, and perhaps others. In every respect, then, it would seem preferable to look toward another and new treaty.

There are several treaties the world over that deal with security and defense matters, ranging from simple military co-operation to more comprehensive and complex measures. The North Atlantic Treaty certainly is the most complete and efficient treaty of all. The defensive value of NATO is unquestionable. While the results in other fields are less spectacular, they are, nevertheless, important.

By comparison, the Balkan Pact, which has been dormant for more than two years and the Baghdad Pact, from which Iraq has recently withdrawn, have neither the same significance nor value.

On the other hand, the Southeast Asia Treaty Organization (SEATO), is midway between NATO and the above-mentioned accords, while Australia, New Zealand, and United States Mutual Assistance Pact (ANZUS) is only concerned with military aspects in the Pacific.

It seems, therefore, that the North Atlantic Treaty should serve as a model for Africa. NATO, with its permanent council in Paris, should be supplemented by a South Atlantic Treaty Organization (SATO) with its permanent seat at Dakar.

First of all, who should be the participants? Without question, the threat against Africa concerns the entire Free World. The Soviet objective is to reach Dakar, which is an ideal jumpoff base to reach South America, where very definite Soviet efforts are being made.

The leader of the Free World, the United States of America, cannot remain outside a treaty that concerns the African world. Similarly, the French Community, the British Commonwealth and the purely British possessions, as well as Belgium and Portugal, should be members by rights. The same is true of Ethiopia

and other states like Spain and Italy which have definite reasons to fear a Soviet advance in Africa.

Morocco and Tunisia would be invited to adhere to the treaty. There remains the question of Argentina and Brazil. Obviously, the loss of Africa would be the beginning of a catastrophe for them. Logically, they should be invited to participate in the preparatory work.

At least 10 or 11 states should participate in guaranteeing the safety of the African Continent against all threats emanating from the Soviet bloc.

It must not be thought that this treaty will only add to the list of those already in existence. The military committee of SATO will be kept extremely busy organizing the defense, coordinating the three theaters of operation—that of the North, the Center, and the South—and organizing the security of the South Atlantic and the Indian Ocean. These tasks

must be started with limited means. The strength that can be allocated to SATO initially will be limited.

The economic-social committee of such a treaty organization would have to study and propose measures for raising the living standard of the African populations to deny the Communists valuable arguments for penetration into the area. The political committee should organize a psychological battle adapted to the populations and capable of countering enemy propaganda.

There is no point in waiting. The situation in the Middle East is not improving. The more we procrastinate, the more progress the Soviets make. Already, Ghana and Guinea are inclined to listen to Moscow propaganda.

We will only put an end to this danger by organizing the over-all defense of Africa. The danger to the continent is clear and present.

... let us be fully aware of two . . . fast-moving phenomena which are part and parcel of the worldwide upheaval of this new era.

One is the rising tide of ethnic nationalism which burst forth from the agonizing struggles of World War II and from the impact of modern communication and transportation—and which is creating truly significant problems in those vital areas of Africa and Asia, known as the 'uncommitted world.' These people—diseased, undernourished, illiterate, impoverished—call for an improved standard of living. They look to see which system—the Free World's or the Communist—can best help them secure the economic necessities of life—and which system can do it more rapidly. We must find solutions to their problems and show them that economic growth and technological progress are in better harmony with our system and our type of freedom—than with Communist slavery.

General Arthur G. Trudeau

In the Belgian Congo

Digested from an article by Edmund C. Schwarzenbach in the SWISS REVIEW
OF WORLD AFFAIRS January and February 1958.

The following interpretative article is based upon observations made by the author, a Swiss journalist, during an extended visit to the Belgian Congo in 1957. Some portions have been omitted as dated by more recent events; elsewhere the wording has been changed so as to place statements in their proper chronological perspective.—Editor.

BELGIAN colonial policy in the Congo was marked by paternalism, that is, a paternal care on the part of the white ruling class for the natives. This basic attitude was justified, for the natives had come into contact with the complex civilization of Europe fresh from their primitive stone and iron age. The psychological abyss separating the two parts of the population was immense, although the natives' instinct and astonishing skill of imitation often deceived one about it.

Paternalism was in line with "the law by which the Congo was taken over." Leopold II, ruler of a state newly created in the 19th century, was shrewd and energetic—a mixture of politician and businessman, such as was typical of the founders' era. He surrounded himself not with representatives of the high nobility, but of high finance. This king of a bourgeois age viewed his creation, the African colony, both as a feat of civilization and as a good investment.

To follow this tradition the Belgian Congo was to be governed by a board of directors in Brussels, similar to a business firm. The first concern was the financial return, but this required that good care be taken of all the members of the company.

Colonial policy as formulated by the white people in the Congo sometimes seemed to rest on the assumption that the territory's boundaries were impermeable. Brazzaville, the capital city of French

Equatorial Africa situated across the river from Léopoldville, was looked upon with misgivings. Experiments under way there to assimilate the native population to the political life might cause "harmful" ideas to enter the Congo scene.

But what did the natives think? No one knew, and few cared. Moreover, the natives had practically no means of expressing themselves. Freedom of the press in a country with so heterogeneous a structure, to be sure, posed a problem. The naïveté of most of the natives who have learned to read is such as to make them take everything they read at face value, and defenseless against all demagoguery. Equally problematical was the practice of silencing native criticism of existing conditions.

During Belgian rule natives having acquired a higher degree of knowledge and Western manners could apply for one of two types of certificates or *brevets de civilisation*. One was the *carte du mérite civique* and the other, marking a more advanced stage, the *immatriculation*. The first imparted a series of privileges, the most important of which was the permission to stay outside native quarters after 2200. Its holder might also acquire real estate, and in the provinces of Kasai and Katanga he could even drink hard liquor like the white people. The *immatriculés* were largely equal to the whites. They could reside in the European parts of settlements if a nonpartisan examination

showed them to be in a position to keep up with the whites in housing and general living standards. It was not easy to obtain any accurate information on the number of *immatriculés*. Apparently there were in each of the larger cities between 10 and 20 such "white natives."

For a long time natives have been trained for skilled jobs in the Congo. Truck drivers, locomotive engineers, post office, bank, business, and government clerks, and noncommissioned officers of the *force publique* (police), as well as grade school teachers, constitute something like the beginnings of a native middle class.

Only since 1954 have the natives been offered educational opportunities, except for the priesthood. The nearly omnipresent police were instructed to do what they could to stifle any nascent political agitation among the natives. Potential leaders were removed to other provinces.

The system prevented the evolution of any group of natives that could fill the political vacuum, at least in part, in case the Belgian Congo should some day be infected with the virus of African nationalism despite all antiseptic measures. There was a tendency to forget—not in Brussels, but rather in the Congo itself—that the colony was not an island, but a part of Africa.

Native Policy

The most violent criticism of the Congo whites was directed against the native policy of the Colonial Ministry. The complaint that Brussels was doing everything for the natives and nothing for the whites was heard so often that one could not help getting the impression there had to be some truth in it.

One of the first objections was to Brussels' extreme reluctance in the matter of immigration. The official explanation for this reluctance was the argument that one had to seek to prevent a development like the one that led to the Mau Mau rebellion

in Kenya. The mentality of the settlers, furthermore, and the fact that large and fertile areas had become the private property of whites were the biggest obstacles to a fruitful cooperation of the two races.

There were, as a matter of fact, only a few thousand white landowners in this huge country, and the law limited the size of the estates to 500 hectares—although there were ways and means to circumvent this provision. Occasionally it was said that it was the large companies with which Leopold II had financed the development of the Congo, and which lived in an indissoluble symbiosis among themselves and with the state, that resisted the settling of independent *colons* behind the camouflage of pronative arguments. People who had lived in the Congo for some 20 years did not agree on the factors blocking immigration and settlement.

Controversial Family Allocations

As a matter of principle the natives—the tribe, not the individual—had priority in the distribution of land. A private buyer had to submit evidence showing that the land in question was not considered inherited property by the natives. This principle was modified insofar as the declaration was usually made by chieftains who were not in the habit of paying much attention to their subjects, but knew how to take care of their own interests.

An object of severe criticism, even on the part of whites sincerely interested in the welfare of the natives, was the mechanical application of Belgian social policy to the native element. This referred, in particular, to the elaborate system of family allocations, not only because the whites, as employers, had to carry the financial burden, but for psychological reasons. The native, lacking the working zeal of the whites in trying to improve their standard of living, was encouraged to obtain a wage increase in the form of an allocation for each child rather than by a sustained performance in his occupation. At the

same time the system was said to impress the native as unjust and nonsensical, because according to his view of life the childless person is the one to be deplored, while the man with a large family is considered blessed with riches.

The policy of family allocations proved that the official colonial policy was distinctly pro-native. The same could be said of the attitude of the whites settled in the Congo, with the exception of a respectable group of colonial officers, missionaries, teachers, and social workers. Who were those whites? For the most part they were the office employees of the administration and commercial houses, as well as merchants who represented European firms. The Belgians among them, especially the lower ranks of the bureaucracy, seemed to constitute a main obstacle to a realization of the *communauté Belgo-Congolaise* (Belgian Congolese community).

Provincial Mentality of Settlers

While the colonial officers proper were selected very carefully, and given a thorough training for their task as administrators of a sector of the *brousse*, too many brought their narrow provincial outlook to their new lives in the colony. Coming from modest backgrounds, they were placed in a position of having to participate in the very lively social competition of colonial life. The man who at home owned a bicycle, now suddenly owned an American limousine. Women who previously were absorbed by their household work and care of small children, now had two or three "boys." The boredom resulting from the availability of servants as well as the strenuous climate resulted in an ill-humor which many considered as one of the main obstacles to the realization of the *communauté Belgo-Congolaise*.

From a few objects found in the Bas-Congo, it may be concluded that Central Africa once passed through a stone age. Otherwise there are no visible signs to

report on the history of the tribes in the Belgian Congo. The remainders of Pygmy races, the many varieties of Bantus, estimated at eight to nine million in the Congo, and the Nilotic and Sudanese races of the Hamitic type have been superimposed one upon the other, mingled and crossbred. It is no longer possible today to have more than surmises about the African migrations. There are, to be sure, some Portuguese testimonies to the existence of large Bantu kingdoms. Diogo Cam found such a one—that of the Bakango—in the 15th century. Later in the 15th and 16th centuries something was known about the kingdoms of the Baluba and Lunda. In the 19th century the Msiri Bayeke empire was discovered by Britons and Belgians on their advance into the Katanga.

Many of the tribes are hardly able to communicate with each other because their languages differ so much. In the northeast they use a very simplified Swahili beside their own tribal language. Swahili is the "basic language," a sort of Esperanto, used by the tribes both among themselves and in their intercourse with the Europeans. The Europeans like it because it is easier to learn than the Negro languages proper, and has a wider field of application.

European Influences

In the impenetrable tropical forests and endless prairies there were few natives who had not come into contact with whites. The Belgian territorial administration was too well-developed for that. In addition, all the mission stations were well-frequented, if only because of the medical services that could be obtained there.

Nearly 40 percent of the adult male native population were engaged in the white colonizers' economy. They worked in the mines, in the industries, on the plantations, on the roads, in transportation, and in public administration. The number of native household help was also very large. These men and women, however, always

returned to their villages in the evening—with the exception of a few native women “housekeepers” of white planters. Native *moniteurs*, or teachers of the grade levels, were frequently found in the schools. Natives also served as medical assistants. They were trained in a special institute at Léopoldville—and at every step there was a native policeman. These members of the *force publique* served

stances it may be difficult to share this opinion.

In the Ruanda mountains a Protestant missionary displayed his ethnographical collection which included a loincloth artfully woven of bast, such as was generally worn some 20 years ago. These loincloths were beautiful and served their purpose well. When it rained they did not stick to the body, and they dried quickly. Today,



Belgian Government Information Center

Congolese railway supervisor

seven-year terms. Together with wife and children they lived in usually exemplary military encampments. In the course of the seven years they learned a trade that they could practice on their own when they left the service; thus the telegraphists all acquired their expert skill in the military service.

The change taking place in the native ways of life in the direction of an adjustment to those of the Europeans is generally appraised as progress. In many in-

all the natives are wearing torn and patched-up “shorts”—as a sign of progress. The natives, moreover, love to drink their homemade banana beer. It has a slightly acid taste, and because it is imperfectly fermented it contains valuable fruit sugar and vitamins. But as a matter of progress the natives were made to drink Belgian Congo beer—filtrated river water with local rice and imported hops, brewed into a beverage which had become a vital necessity for the Belgians, and for the

natives a symbol of civilization. On payday the clerks and mineworkers buy and drink dozens of bottles of the "civilized" beverage.

The African native obviously is not as fond of work as are many Europeans, who view it as the only meaning of life. He likes to lounge about, to chat, to go hunting occasionally, and to leave the work in the field and the kitchen to his wife, or, preferably, wives. Civilization here now consists in stimulating the zeal for work by creating ever new needs. The native begins to adapt himself to the style of the whites. He works his eight hours in the mine, the factory, or as a waiter at the hotel. In return, he is enabled to buy European clothes, eye glasses (of ordinary windowpane glass), or maybe a chromium steel-trimmed bicycle.

The constant complaint from the whites is that the natives forget and neglect everything they have learned as soon as they are no longer supervised. This phenomenon proves how much the progress has remained superficial. The fault—if fault it is—may not all be the natives'. Too readily the European proceeds from the assumption that the education of the natives has to begin at zero. Rare are men like Père Colle, who studied the customs of the Bashi and described them in a two-volume work, or J. Tempels, who in his treatise on *La Philosophie Bantoue* shows that behind their curious ways the Bantus have an organic and meaningful view of the world—a sort of Bantu ontology. Conversion to Christianity and civilizing education can be effective only if they take these foundations into consideration and build on them.

Copper

It was with great attention that Leopold II, King of the Belgians, read the books in which Stanley wrote about the rich resources, and especially the "abundance of copper" in the Congo. Copper, however, meant Katanga, those endless

prairies south and west of the source of the Lualaba River, as the upper part of the Congo River is called. At the beginning of the nineties a race set in. From the south, the present Rhodesia, British expeditions advanced on the region—as instructed by Cecil Rhodes, then Prime Minister of the Cape Colony. Leopold, not in his capacity as King of the Belgians, but as sovereign of the "Free State," made haste to dispatch exploratory teams to the Katanga, for already the British press asserted that the highland part of the Congo Free State had never really been occupied and that all virgin areas belonged to whoever would occupy and exploit them first. British missionaries had already settled in Katanga, and Rhodes sent two expeditions to follow them.

The first expedition advanced to the area of the present Elisabethville, but fell victim to a smallpox epidemic then decimating the native population. The second aroused the displeasure of the despotic Negro potentate Msiri, because it failed to bring large enough presents along. The British left without having achieved anything. Shortly afterward the Belgians succeeded in making an agreement with Msiri in the name of the "Free State." They had been careful enough not to forget the appropriate gifts for the native tyrant. Later they quickly got rid of him, which was easy because his own subjects hated him.

Jules Cornet, who participated in the expedition as a geologist, brought the first scientific evidence to Europe that Katanga is one of the world's richest regions as far as mineral resources are concerned. Gold, copper, tin, zinc, silver, lead, and, more recently, tungsten and manganese ore, cobalt, palladium, tantalum, germanium, cadmium, platinum, diamonds, and uranium make Katanga the economic center of gravity of the Congo.

In order to raise capital to develop the territory, Leopold II used the ingenious

method of founding companies which received extensive concessions and privileges, but in return had to accept the government as a partner and had to deliver a considerable share of the profits to it in the form of dividends. Preferably the concessions were given to companies that committed themselves to building railroads and exploiting the mineral deposits. In 1901 the Special Committee for Katanga (CSK), which ruled like a state

It is due to the activity of the *Union Minière* that the Katanga, with one of the world's driest and most unproductive soils, and with hardly any population at all, has become a mining and industrial country of the first order. Altogether the company could be said to have assumed the responsibility for the welfare of about 90,000 natives. The workers' settlements were exemplary in every way. Free medical care and assistance given young



Belgian Government Information Center

Diamond mining near Bakwanga.

within the state over an area of some 45,000,000 hectares, was established. Five years later a royal decree founded the Upper Katanga Mining Company (*Union Minière*), in order to exploit the mineral resources. Together with the CSK it constituted a whole on the basis of contractual agreements. In both companies, as well as in the Lower Congo-Katanga Railroad Company (BCK), the government owned a majority of the shares, as it did in the Congo International Forestry and Mining Company (*Forminière*).

mothers and infants kept the rate of sickness at a minimum. Boys showing the necessary aptitudes were trained for skilled occupations. Much attention was given to the leisure-time activities of the natives.

Kipushi, near Elisabethville, is the only underground mine of the *Union Minière*. The copper ore, blended with the sulphide of zinc that is also being mined here, has the highest copper content of all such ores in the world; it is, moreover, easy of access. The precious ores are located close

Union
of the
soils,
at all,
coun-
com-
d the
about
ments
med-
rourng

to the Rhodesian border; geologically they are linked with the Rhodesian copper belt.

The northern copper areas produce mostly copper oxides which either lie open or close to the surface. Centuries ago, it is assumed, the indigenous population already knew the strikingly green malachite. In any event, we have proof that the natives in the Katanga knew how to produce copper oxides in small furnaces even before the whites arrived.

Twenty kilometers southwest of Jadotville are the uranium mines of Shinkolobwe. Visitors are not wanted here, and no production figures have been published. But doubtless Shinkolobwe has made a large contribution to the prosperity of the *Union Minière*.

The northern group of the *Union Minière* is about 15 kilometers farther up on the railroad line which links the Katanga and the Atlantic, although leading



Belgian Government Information Center

Workers' quarters for employees in the Bakwanga mines

It is also known that already in the 16th century the Dutch got quantities of the coveted red metal from the coast of the present Portuguese Angola—it can only have been Katanga copper.

The ore that is being mined in Kipushi is processed on the spot and the copper is separated from the zinc sulphide mixed with it. The foundries of Lubumbashi are located on the edge of Elisabethville. Here the metallic copper is being won. The process of recuperation also yields such rare metals as germanium and cadmium.

through Portuguese Angola. The most important mines of Kolwezi are Ruwe, Musonoie, and Kamoto. Around the turn of the century some gold and some platinum were first found at Ruwe. Today copper oxide is being won here. After the removal of a layer of sterile earth about 40 to 50 meters in thickness, a mixture of malachite and clay can be mined. The copper is obtained at a separation plant with a capacity of 110,000 tons per month. The Musonoie mine looks like a moon landscape. On a length of one kilometer

center
sick-
the
for
was
the

only
nière.
hide
has
ores
y of
close

and a width of 500 meters, miners and bulldozers work at a depth of 70 meters. The minerals show in all possible hues. In places where cobalt oxides have been deposited, the rock is rose colored, while the malachite nearby is of an emerald green. Electrically operated shovel cranes tear the loose ore from the face of the mine and fill it into the tireless little wagons which have a capacity of 20 tons each.

commune works on Lake Lualaba created a reservoir covering more than 20,000 hectares. Four groups of generators produced 500 million kilowatt hours per year, while the Le Marinel plant farther down, working with the same reservoir water, produced 1,300,000 kilowatt hours per year. Thus it was possible to equip the mines with electric power, to heat the furnaces electrically, to operate electro-



Belgian Government Information Center

Most Congo copper is taken from open pit mines but rich ores are also recovered by tunnel mining operations in some areas

Kamoto, the smallest deposit, has the poorest ores, but they can be enriched through a simple washing process. The Kolwezi concentration plant, which works by the flotation method, can handle 220,000 tons of enriched minerals per month. At a special plant not far from Kolwezi metallic zinc is won from the zinc sulphide processed at the sulphur acid plant at Jadotville.

The *Union Minière* developed four large hydroelectric plants. A dam at the Del-

lytic plants, to provide the towns in the area with light, to electrify the railroad, and, in addition, to export 500 million kilowatt hours per year to Northern Rhodesia.

The *Union Minière* produced about 230,000 tons of copper annually. This placed the Belgian Congo fourth among the world's leading producers—after the United States with 950,000 tons, the British Commonwealth with 500,000 tons, and South America with 400,000 tons. It is

reated
20,000
s pro-
year,
down,
water,
s per
ip the
at the
electro-



Center
red by

in the
ilroad,
million
rthern

t 230-
placed
g the
the
Brit-
s, and
It is

easy to see why the Belgians put up a statue of King Leopold II in every town in the Congo!

More on Native and White

In 1957 the inhabitants of the Belgian Congo numbered 113,000 whites, Asians, and mulattoes, and 13 million African natives. Three million of these natives were separated from their tribes and lived in the native sections of the large cities or in workers' and miners' settlements. There were altogether 26,500 primary schools for the natives, in which 1,300,000 children were being taught. The teachers were 3,500 Europeans, and 40,000 native *moniteurs*. In addition, there existed 453 occupational and trade schools with more than 13,000 native pupils, and 33 agricultural schools with about 1,100 native pupils. The schools of the large cities and, in particular, those of the rich mining companies, compared favorably with their European counterparts as far as physical arrangements were concerned.

For the last several years the natives had access to all public places of entertainment and public conveyances. On the train from Léopoldville to Matadi, I sat together with natives in the dining car. Most whites, of course, do not travel by train any longer, but by plane or automobile. But even on *Sabena* planes one met with native passengers.

Traveling through the large country—the arid prairies of the Kasai, or the green expanses of the Katanga, or across the passes of more than 2,500 meters altitude in Ruanda—we were surprised to be greeted again and again so respectfully by the natives. The proud Watutsi in Ruanda, of course, who always have a Bahutu walking behind them to carry whatever there is to carry, are more reserved. In general, the closer a city, the less polite and friendly the natives.

Power

The 32 waterfalls on the lower part of the Congo River together represent the

largest reservoir of hydroelectric power known in the world. The river whose volume, as the newest measurements have shown, has reached the "minimum" of 25,000 cubic centimeters per second only once in the course of five years, drops 260 meters on a length of 350 kilometers. Only 40 kilometers from Matadi, where the mouth of the Congo becomes navigable for oceangoing ships, the river makes a large loop of 26 kilometers' length. On this stretch it drops 100 meters. The connecting link between the beginning and the end of the loop is only 16 kilometers long.

As early as 1929 a study group worked out a preliminary project for the exploitation of waterpower at Inga. The undertaking aroused no response at the time, and in 1939 the group was dissolved again. After the Second World War, however, prospecting was resumed. A Syndicate for the Development of Electric Power on the Lower Congo was created in which the Belgian Government and numerous private industrial companies participated. Various expert bodies, including one Swedish and two American engineering firms, were commissioned with the exploration of the territory.

In November 1957 the Belgian Government decided to take the construction of the Inga plant in hand. Concurrently, King Baudouin, presiding over the Council of Ministers announced the foundation of a "National Society for the Study of the Development of the Lower Congo." At the same time he declared that the Council of Ministers had decided to tackle the development of hydroelectric energy of the Congo River at Inga. The total investment for the powerplant alone was estimated to run to 320 million dollars.

The building of the Inga plant was to introduce a new stage of the industrialization of the Belgian Congo. The plan provided for five phases. In the first stage the Congo would be tapped at the begin-

ning of the loop at Inga on the lefthand shore. A canal would be dug to run through the Van Deuren Valley to a heavy concrete wall just below the center of the second part of the loop. There a first powerplant would be built.

The Belgian Government carried out a large-scale mosquito extermination campaign by helicopters, in order to make the preliminary work in the environment of Inga possible at all. Two locations were selected for the settlement of the extensive industrial installations; first, the relatively small high plateau of Kinoki on the shore opposite Matadi, and second, and most important, the extensive region northeast of the port of Banana.

At the same time the Belgian Government began cooperating with private industries. Beside a Belgian Aluminum Syndicate, an international Syndicate for the Exploration of Aluminum at Inga (*Alumina*) was established, in which the large international aluminum concerns participated.

The 1957 declaration of the Belgian Government had the purpose of calling for international participation in an industrialization project of importance to the whole Free World. According to studies made in the United States, the world requirements of aluminum are increasing greatly. If large quantities of electric power could be produced at Inga at a particularly low price, the international aluminum companies would consider it feasible to transport there bauxite, or at least clay, even from such far away places as Indonesia and Guiana. The separation of uranium isotopes by the method which the Americans have first used at Oak Ridge and are now using on a still larger scale consumes tremendous quantities of electric energy. It thus seems possible in a country like the Congo, which has enough uranium ore of its own, that the tremendous volume of available electric power could be made portable by the

building of a large isotope separation plant.

Some Conclusions

European-African cooperation has existed ever since the colonial powers entered the Dark Continent. While colonization, in some places and some periods, came close to exploitation, relations between whites and natives soon developed into a reciprocal give-and-take. The very large increases of population alone prove that the colonizers made life easier for the natives. They introduced hygiene and better nutrition in exchange for the fruit of the land and the mineral resources that were channeled into international trade.

The term "Eurafrica" is of very recent date. Its use is encouraged by tendencies that would like to make Europe into a "third force." It also serves as a camouflage for the striving of some colonial nations to share the difficulties and financial burdens of their overseas areas with their European neighbors.

Today, European-African cooperation is endangered as never before. North of the Sahara the Moslem Maghreb sits like a barrier between Europe and the main mass of the Dark Continent. From Cairo as a center of disturbance, Pan-Arab agitation advances in the direction of the West and of the Atlantic. France's relations with the two emancipated protectorates Tunisia and Morocco will be tense, so long as the Algerian problem remains unsolved.

In the south of the Dark Continent the situation also is precarious. The Nationalist government of the Union of South Africa tries to apply the doctrine of *apartheid*, even while the large demand for labor as created by the process of industrialization stands in patent opposition to the strict segregation of races.

White immigration, moreover, is being throttled for reasons of partisan policy, with unhappy results.

In the heart of the Dark Continent lies the Congo. It has been developed accord-

ing to the large-scale and farsighted program of the Belgian Colonial Ministry, practically undisturbed by agitation from the outside. The atmosphere prevailing within the colony did not, until recently, attract much interest and activity on the part of internationally organized world reformers, or any large numbers of agitators of one kind or another. North Africa and South Africa, for a while also Kenya, absorbed all these interests and activities in the past. The United Nations was preoccupied with the Union of South Africa and Southwest Africa, while the anti-European delegations to the councils of the United Nations, operating under the cover of "anticolonialism," found a rewarding opportunity for agitation in the Algerian conflict. Thus the Belgian Congo was largely spared outside interference.

But that could hardly remain so forever. The main danger to the gradual organic development of countries with a preponderantly primitive population is the latter's defenselessness in the face of simplifying prescriptions for salvation. What happens if primitive peoples are systematically acquainted with Western ideas but lack the required inner experience to use them? Even in highly civilized nations the half-educated constitute a threat to the political stability of the community. What is to become of a country the majority of whose population must inevitably pass through a phase of "half-education" on the way from primitivity to Westernization? Such considerations may explain the reserve the Belgians displayed in enlisting the cooperation of a so-called intellectual native elite.

Another danger to stability in the Belgian Congo could be seen in the potentialities of racial antagonism. As the colonial administration had long realized, it was

the small mistakes and the lack of tact which in the racial situation weighed more heavily than the rules on the housing of natives, for example. Those whites who compensated their personal inadequacy with a racial superiority complex were the really dangerous catalysts of racial mania among the dark-skinned people.

The prudent policy of integration practiced by the Colonial Ministry reduced these dangers to a minimum. But the rapidly advancing development in the surrounding French and British colonial areas could not remain without some echo in the Belgian Congo. The hope was that the higher living standards of the natives under Belgian administration—and especially the opportunities they had in skilled employment—would not remain without some good effect among the natives.

The economic dependence and the difficulty of newly self-governing areas of finding investment capital might also have worked for the Congo. If Belgium had succeeded in realizing—if only in part, and on the basis of international cooperation—the ambitious industrialization envisaged in connection with the Inga power-plant project, the Belgian Congo could, without the creation of complicated "Euro-african" institutions, have become a pillar of European-African collaboration and thus of the community of free peoples in general.

However, old type colonialists long espoused the theory that the Belgians in Africa would have "10 years more of it at the most." But they as well as those holding more optimistic views knew that the future of the Belgian Congo depended on so many different factors that it was—and is—impossible to make any conclusive predictions.

AFRICA . . . What to Read

Dr. Francis H. Heller

"Of books on Africa there is no end."

This comment by the British African pioneer Lord Lugard in 1930 is even more true today. The last decade has witnessed a sharp increase in scholarly interest in Africa, and along with this went a corresponding upswing in popular writing, both fiction and nonfiction, focused on Africa. The following paragraphs suggest a few titles of possible interest to the military reader.

John Gunther's *Inside Africa* (1955) was a popular survey in this sense. It was not free of errors, however, and is dated today; but it still makes lively reading. *Africa Today*, a collection of essays edited by Charles Grove Haines, also published in 1955, was more scholarly in nature. It, too, has been lessened in value by later events.

Nationalism in Colonial Africa (1957) by Thomas Hodgkin is by a British author who is thoroughly familiar with the national leadership, especially in the formerly (or still) French and British areas.

Political change in Africa has been studied by few Americans. Gwendolen M. Carter, professor at Smith College, has traveled in Africa and has written extensively on that area. Her writing includes *The Politics of Inequality: South Africa Since 1948* and an excellent compilation of essays *Transition in Africa* (1958), which she has edited in conjunction with William O. Brown. Other political studies are by David Apter, *The Gold Coast in Transition* (1955), and James S. Coleman, *Nigeria: Background to Nationalism* (1958).

A series of papers presented to the American Assembly of Columbia University, entitled *The United States and Africa* (1958), are of uniformly high quality.

Peter Ritner's *The Death of Africa* (1960) is among the most recent volumes.

As might be expected, most books on formerly French and Belgian Africa are in French. English and American writers have concentrated on the areas settled or colonized by the British. Exceptions are: James Duffy whose *Portuguese Africa* (1959) is essentially a historical survey; and Virginia Thompson and Richard Adloff, a husband-and-wife team, whose *French West Africa* (1958) will be an excellent point of departure for anyone interested in that region.

For East Africa, Mona Macmillan's *Introducing East Africa* (1955) gives a detailed view, although with little emphasis on political or economic problems. Z. A. Marsh and G. Kingsnorth have written the only general history of that part of the continent: *An Introduction to the History of East Africa* (1957). Of more recent focus is Ernest W. Luther's *Ethiopia Today* (1958).

The July 1959 issue of the magazine *Current History* is a symposium on the "New State of Africa."

Dr. Heller, Associate Dean of the College of Liberal Arts and Sciences, University of Kansas, is a major in the United States Army Reserve. He saw active service during World War II and the Korean War and is now a mobilization designee to the editorial staff of the MILITARY REVIEW.

P. C.
Gray
Louis
Roug
B
Th
is ar
life
Conf
and
T
Loui
nize
writ
G
Wes
Scot
was
fede
Sun
forc
first
con
Car
dur
mar
Vir
G
peo
jeal
disl
net.
T
to f
of
per

BOOKS OF INTEREST TO THE MILITARY READER

P. G. T. BEAUREGARD—Napoleon in Gray. By T. Harry Williams. 345 Pages. Louisiana State University Press, Baton Rouge, La. \$4.75.

By LT COL WILLIAM D. BEARD, *Inf*

This biography of General Beauregard is an interesting and graphic story of the life of this picturesque and controversial Confederate general during this critical and tragic period of our Nation's history.

The author, Professor of History at Louisiana State University, is a recognized authority on the Civil War and has written several other books on this period.

General Beauregard was graduated from West Point in 1838, served on General Scott's staff during the Mexican War, and was one of eight full generals of the Confederacy. He fired the opening gun at Fort Sumpter; commanded the Confederate forces at First Manassas; fought in the first great battle in the West at Shiloh; conducted the defense of Charleston, South Carolina, from attack from the sea; and during the later months of the war commanded the forces defending Petersburg, Virginia.

General Beauregard was a hero of the people of the south. He was critical and jealous of his superiors and thoroughly disliked by President Davis and his cabinet, a feeling which was mutual.

This book is a worthwhile contribution to the writings on the Civil War and one of particular interest to students of this period.

COLONEL ELMER ELLSWORTH. A Biography of Lincoln's Friend and First Hero of the Civil War. By Ruth Painter Randall. 295 Pages. Little, Brown & Co., Boston, Mass. \$5.00.

By MAJ HOWARD H. BRAUNSTEIN, *Armor*

Ruth Painter Randall, recognized biographer of Abraham Lincoln and his family, writes in a bright, colorful style the biography of a beloved figure whose death shocked the North. Born in New York in 1837, killed in Virginia in 1861—the first officer victim of the Civil War—Elmer Ellsworth, of whom it has been written, "His memory will be revered . . . long after the Revolution shall have become history," has been all but forgotten.

This "man of the hour" a century ago, attracted attention from all directions, and his enthusiasm led him into many areas of American life. Variety adorns his biography. There are the gay parades and exhibitions of prewar days, the exhilaration of Lincoln's campaign and triumphant procession to the capitol, and the swift organization of the New York Fire Zouaves who shocked staid Washington before Colonel Ellsworth led them into Alexandria, Virginia, on 24 May 1861.

Mrs. Randall writes in the bibliographical note, "Few biographies can be written so completely from manuscript sources as Elmer Ellsworth's."

Of special interest to the student of the Civil War, this well-written book portrays the intimate personality of Lincoln's friend and first hero of the war.

TOWARD UNITY IN AFRICA. A Study of Federalism in British Africa. By Donald S. Rothchild. Foreword by Gwendolen Carter. 224 Pages. Public Affairs Press, Washington, D. C. \$5.00.

By MAJ FRANCIS H. HELLER, *USAR*

This study, based upon extensive documentary research and discussions with leading personalities of the respective regions in Africa, is concerned with three efforts to use the device of federalism to solve political problems in Africa.

The regions involved are East Africa (Kenya, Uganda, Tanganyika), Central Africa (the Federation of Rhodesia and Nyasaland), and Nigeria. The author is cautiously optimistic but the overriding impression the reader is likely to carry over is the bewildering complexity of currents and countercurrents and of the inadequacy of traditional methods in this setting.

DO THEY UNDERSTAND YOU? A Guide to Effective Oral Communication. By Wesley Wiksell. 200 Pages. The Macmillan Co., New York. \$4.95.

By LT COL PARKER E. CONNOR, JR., *Inf*

This book is written for persons who want to talk and listen more effectively. The author's intentions are to make the reader aware of the value of good oral communication, and to present specific suggestions for achieving improved communications and understanding.

While most of the material is directed toward the employer-employee relationship in management, the principles discussed will prove valuable to the Army officer or any interpersonal relationship.

Mr. Wiksell believes the key to good oral communication lies in the understanding of one's own attitude and its effect on the listener. He stresses good listening, which he considers the most overlooked tool of management.

COMMUNIST CHINA AND ASIA. By A. Doak Barnett. 575 Pages. Harper & Brothers, New York. \$6.95.

By COL HAROLD E. BEATY, *CE*

Probably the most important political and strategic change in the international situation since World War II is that of the rise to power of a Communist regime on the Asian mainland. During the past decade Communist China has emerged as one of the most dynamic, disrupting, and disturbing influences on the world scene. It is recognized that the coming to power of the Chinese Communists in 1949 was a major defeat for American policy in Asia.

Prior to that time the United States had viewed China as the key to American interests in that part of the world. During the 1930's and 1940's the US supported the Chinese Nationalists in the hope that China could be built into a strong, unified, democratic nation, thereby assuring a strong ally. It was felt that such an alliance would exercise a stabilizing influence in Asia.

Since 1949, while the Nationalists with American support have maintained a precarious existence on Taiwan, mainland China under Communist domination has become a strong, unified, and totalitarian nation allied with the Soviet Union. This Communist-controlled nation is intensely hostile to the United States and poses a serious threat to the future of Asia.

This carefully prepared book by Mr. Barnett is a thorough study of Communist China's growing impact on Asia and of the problems it poses to the US. A probing examination of United States policy toward Communist China is included.

The professional military man should include this book in his library.

The student of world affairs, with interests in the Far East area, will find it well-prepared and of high value.

TIME RUNS OUT IN CBI. United States Army in World War II. By Charles F. Romanus and Riley Sunderland. 428 Pages. Superintendent of Documents, US Government Printing Office, Washington, D. C. \$6.75.

The loose ends of the China tangle are left dangling in the final volume of the Army's trilogy on China-Burma-India in World War II. The tragic irony brought out by the Army's new book is that Allied victory, coming when it did, in effect doomed Chiang Kai-shek to eventual loss of the Chinese mainland.

The story of Lieutenant General Albert C. Wedemeyer's attempt to provide the Chinese with an army that they could support and also be powerful enough to guarantee China's freedom is the core of this book.

Chiang's forces were steadily gaining in strength. But with Japan's surrender time ran out, and the Generalissimo was left with a nation that was less than whole to face both internal and external Communist threats.

In concluding the story of the US Army effort in China, the authors touch on such topics as American dealings with the Chinese Communists, the relief of Major General Claire L. Chennault by Generals Marshall and Wedemeyer, cloak-and-dagger intelligence work, and the unending complexities involved in trying to provide Chiang with well-fed, well-trained, fully equipped, and competently led forces.

When the fighting stopped on 14 August 1945, soldiers ran cheering into the streets, Chinese civilians offered incense and set off firecrackers, and Americans at home shouted, wept, danced, and prayed. But the authors add a sobering note:

The day they celebrated would mark not the end of the 20th century drama of conflict between Pacific powers but the end only of an act. The curtain was to rise again.

THE SPEARHEADERS. By James Altieri. 318 Pages. The Bobbs-Merrill Co., Inc., Indianapolis, Ind. \$5.00.

By CWO TOMÁS H. GUFFAIN, *Inf*

In these times of constant search for new tactics, methods, and techniques for use on the nuclear battlefield, a pause in retrospect can prove to be refreshing, inspirational, and rewarding.

This history, an eyewitness account of Darby's Rangers, the first US Commando type unit, is told with deep sentiment and justifiable pride by a man who lived throughout the entire gamut of hell and glory of this unique unit, from its formation in Ireland, through its training in Scotland under the British Commandos, and combat in North Africa, Sicily, and Italy.

Dieppe, Arzew, the Sened Pass, El Guettar, Gela, Mount Della Lapa, Porto Empedocle, Messina, Salerno, Naples, and Anzio unfold in a kaleidoscope of sweat, blood, courage, and victory. Made strong, alert, and resourceful by the most intensive tactical training and physical conditioning imaginable, these carefully selected Rangers could move stealthily upon a numerically superior enemy, fall upon him with lightning surprise, kill, destroy, demolish, and then rapidly vanish leaving utter chaos behind.

The Ranger units of World War II could very well offer a pattern for the mobile units of the nuclear battlefield capable of rapidly concentrating with utmost secrecy to deliver a lightning, hard-hitting blow and dispersing with equal rapidity to avoid nuclear destruction.

James Altieri, a former Ranger who rose from the ranks in the original First Rangers to become company commander of Fox Company, 4th Rangers, has written a vivid, dramatic, and inspiring account of the daring exploits of well-trained, well-led American doughboys—an exposition of the ultimate weapon at its best.

THIMAYYA OF INDIA: A SOLDIER'S LIFE. By Humphrey Evans. 307 Pages. Harcourt, Brace & Co., New York. \$5.95.

By MAJ SAM H. SHARP, *Inf*

The title sums up the content—a thoroughly enjoyable and engrossing story of the life of a remarkable man, General K. S. Thimayya, today's Chief of Staff of the Indian Army. This book is interestingly written by a skillful journalist.

Thimayya is best known to Americans for his performance as Chairman of the United Nations Repatriation Commission in Korea in 1954 when he earned the respect of both sides by the fairness and impartiality of his decisions in the face of conflicting pressures and moral viewpoints.

This story leads from his childhood through his military service to his present position as the senior officer of the Indian Army. It includes vivid and personal descriptions of his service on the northern Indian frontier, and as a staff officer, battalion commander, and brigade commander in battle in World War II.

This book is worthy of attention for tips on practical leadership dealing with prejudice, personalities, and custom and religion in the military service, and is pleasant reading.

THE FIERCE LAMBS. By A. A. Hoehling. 210 Pages. Little, Brown & Co., Boston, Mass. \$3.95.

By MAJ EDWIN J. MCCARREN, *Armor*

This is the story of Lieutenant Will Fitzsimons, Corporal Bethel Gresham, Private Tom Enright, and Private Merle Hay, the first four United States casualties of World War I.

Mr. Hoehling presents an interesting account of life in the United States just prior to entry into the war, the events which caused the US to enter the war, and the public reaction to these events.

To depict the typical American attitude toward the approaching conflict, the author introduces the background, home life, and families of these initial casualties.

The balance of the book is devoted primarily to the organization, training, overseas movement, and initial combat action of the 16th Infantry Regiment, 1st Infantry Division, and to the reaction of the American and French people to the early casualties.

This is an interesting, well-written story which should be of general interest to the military reader. It is, however, of limited value as a military reference.

CIVIL WAR IN THE MAKING. 1815-1860. By Avery D. Craven. 115 Pages. Louisiana State University Press, Baton Rouge, La. \$3.00.

By LT COL HORACE M. BROWN, JR., *Arty*

Any student of history will acknowledge that far more effort has gone into the study of wars themselves than the study of the underlying causes. Professor Craven reverses the popular trend by writing a study on the causes or events leading to the American Civil War.

His analysis of the prologue of the American Civil War startles the reader because it presents a striking parallel to our 20th-century world. For years, cooler heads in authority in the North and South tried desperately to maintain a policy of "coexistence." Eventually, their efforts proved in vain with the clash of interests, and the fanatical zeal of the "believers" who tried to foster their beliefs on the "nonbelievers" by any means, fair or foul.

The book will make the reader realize more fully that wars normally do not "just happen." It will make him aware that in many instances, the underlying causes for different wars have been essentially the same. Recognition of this fact and a willingness to "coexist" by enough people may assist in preventing additional wars.

NASSER'S NEW EGYPT. A Critical Analysis. By Keith Wheelock. 326 Pages. Frederick A. Praeger, Inc., New York. \$6.00.

Mr. Wheelock, a man who has devoted a great deal of attention to Egyptian affairs (including the establishment of a "close working relationship" with Nasser), describes the Egypt of 1952 as a "stagnant country." He writes that in order to initiate much needed reforms and to assure a rapid development of the country, an authoritarian form of government was needed. After a brief committee type rule by a military junta, 34-year-old Colonel Gamal Abdel Nasser emerged as the authoritarian needed to take the reins of government with firm and positive hands.

This book is a thorough analysis of the record of the Nasser regime. Much of the text is devoted to detailed presentations of statistical data reflecting progress, or lack of it, in the fields of agrarian reform, education, economics, social development, and industrialization. Although this data does not make lively reading, it provides authoritative and convincing background for the author's conclusions as to the strengths and weaknesses of the regime.

The impression is clearly created that the sincerely motivated, talented, but inexperienced ex-Army officers who surround Nasser have not been able to meet the ambitious goals which they have set in their many reform programs. Irrespective of this, the fact remains that much has been accomplished since 1952, and that the regime and President Nasser have matured rapidly in the intervening years. Regardless of his failings, Nasser "can become one of the great personalities of the 20th century, at least within the Afro-Asian world," and that in him Egypt has found her "best available leader."

Nasser's New Egypt is fine reading for all those interested in broadening their understanding of contemporary problems and events in this important area.

WAR IN THE MODERN WORLD. By Theodore Ropp. 400 Pages. Duke University Press, Durham, N. C. \$10.00.

By MAJ ROBERT C. BURGESS, *Army*

B. H. Liddell Hart has called this book "A brilliant survey of the history of warfare in modern times, and on the whole the best yet produced anywhere." The book is well-deserving of such high praise from all who appreciate an author who writes skillfully, whose writings obviously are based upon extensive and painstaking research, and who carefully annotates his text with bibliographical references which facilitate and encourage further study.

This fast-paced history is not designed for the casual reader. A substantial foundation in military history and geography is required in order to follow Ropp through his brilliant analyses of all types of warfare—military, naval, and air—from 1415 to the present.

The author traces the development of war in terms of its political and sociological implications, changing military technology, and the development of new organizational concepts.

Major military writers—Frederick the Great, Du Picq, Mahan, Douhet, Fuller, and particularly Clausewitz—are quoted freely throughout the text. The influences exerted by these men, both in their time and our own, are brought out clearly. Impressively complete bibliographical footnotes direct the reader to a great variety of additional references and express in definite terms the author's opinions of the works cited.

Its bibliography alone would suffice to place this volume among the most valued references of military literature. Considering in addition the unique contribution of Professor Ropp in relating the history of modern warfare to political, sociological, and technological development, *War in the Modern World* constitutes a major achievement in military writing.

THE GENERALSHIP OF ALEXANDER THE GREAT. By Major General J. F. C. Fuller. 336 Pages. Rutgers University Press, New Brunswick, N. J. \$7.50.

By LT COL VASCO J. FENILI, *Armor*

Since war, other than mere brigandage, is a political act and an instrument of policy, statesmanship and generalship are near akin, and although usually the responsibilities of conducting a war are divided between a government and its general, or in recent times its general staff, in Alexander they were united, because as king of Macedon and hegemon of the Hellenic League he combined in his person complete political and military authority. He could elaborate his own policy and develop his strategy in accordance with it, and had it not been for the genius he displayed as a statesman in his conduct of war, under no conceivable circumstances could his generalship have accomplished what it did.

The above quote defines the theme of this classic summary of the achievements of Alexander the Great, captain-general and statesman par excellence. As indicated by General Fuller in the preface, this book is intended as a sample of the type of work that if a half dozen or more were written on "the leading generals in history, and the whole then condensed into a single volume, an invaluable manual on generalship could be produced." This example is an outstanding illustration of the skillful use of limited detailed source material and of cogent analysis to relate Alexander's life to his achievements and his achievements to his time, to our time, and to timelessness.

Although General Fuller gives full recognition to Alexander's genius, and even to his deification, he very appropriately acknowledges Alexander's inheritance from his father, Philip of Macedon. Philip had created a completely professional army that was a combined force of all arms

and in which the cavalry was the decisive arm, replacing the phalanx as the instrument of shock. This army was ever-ready to fight both in winter and summer and over all types of terrain, as Alexander proved to the surprise of the enemy.

From Philip, also, Alexander learned to appreciate "that in war military force is not the sole weapon in the armory of a general, or even the most puissant." General Fuller emphasizes as Alexander's outstanding trait as a statesman his policy of conciliation toward the peoples he conquered.

General Fuller emphasizes the failure of Hitler and the Allies alike to have profited from Alexander's example. Hitler failed to use a policy of conciliation toward the Russian people, and instead of gaining their support, drove them in desperation to Stalin's support. The Allies' policy of unconditional surrender similarly eliminated any opportunity for anti-Hitler factions to attempt to negotiate for an early end to the war.

The plan of this book is unique and most appropriate to accomplish the aim of the author. Part I, "The Record," covers "The Background" that sets the stage for Alexander's performance, then in concise, lucid narration his achievements are outlined. Part II, "The Analysis," deals in detail with Alexander's great battles, sieges, and small wars, and analyzes Alexander's statesmanship and generalship. The latter is done in terms of seven principles of war.

The great value of this work is the author's constant preoccupation with relating the lessons to be learned from the age of Alexander to the present time. Especially noteworthy is the attention given matters political and administrative.

This book makes a major contribution toward fostering the adoption by the Free World of this concept of the role of military power.